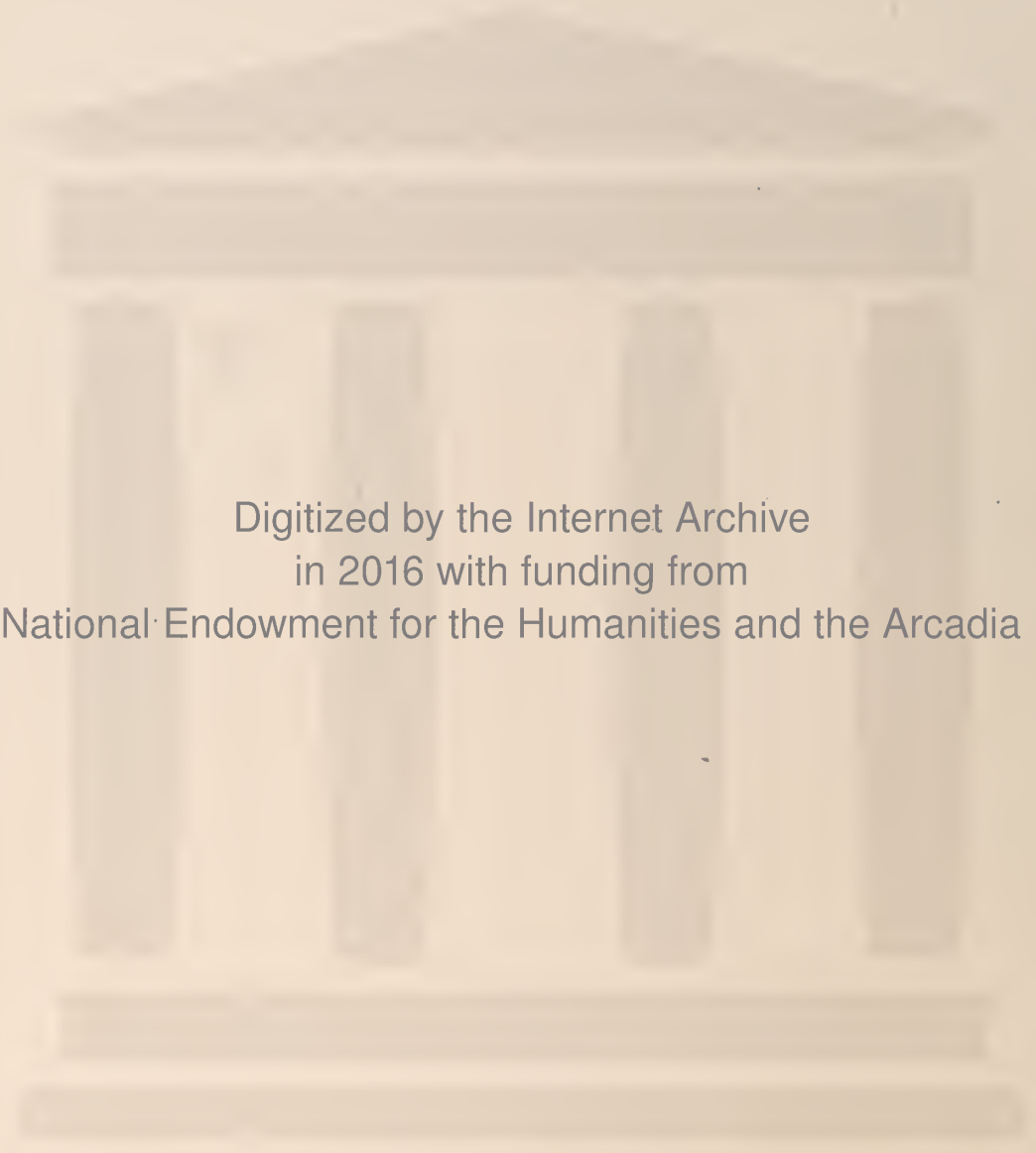
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Virginia MEDICAL MONTHLY

OFFICIAL PUBLICATION OF THE MEDICAL SOCIETY OF VIRGINIA

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1947

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V. 74 no. 1

HAPPY NEW YEAR

January 1947

SYMBOLS OF SIGNIFICANCE

Thrombin Topical

(Bovine Origin)



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Virginia Medical Monthly

Vol. 74, No. 1.
WHOLE No. 1135.

RICHMOND, VA., JANUARY, 1947

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25 CENTS A COPY

GUEST EDITORIAL

Endocrinology And The War

ARMA virumque cano. A good soldier must needs be a virile man. Dogged determination, stamina, brute strength and soldierly courage are masculine attributes. Virility is in reality a chemical expression and may be equated with androgenic function. The androgens are concerned not only with the secondary sexual characteristics but also with nitrogen metabolism, protein storage and muscle-mass. Poor gonadal function may be translated into terms of fatigue, instability, muscular weakness and lack of aggressiveness. These facts were taken into consideration when 13,000,000 men of draft age were examined for service with the Armed Forces. Of all those rejected for Service, one per cent, almost 40,000 cases, had some endocrine disorder. Preeminent amongst these were various phases of eunuchoidism.

Eunuchoidism is an entity which has become generally appreciated only in the past decade or so. The frequency of this syndrome was vividly brought to attention in the mass examination of men in our quest for manpower. It is a remarkable fact that though this syndrome has been known for centuries, the medical world has given it full cognizance only in the past decade or so. The apostle Matthew had discerned, "Some eunuchs were so born from their mother's womb and some eunuchs were so made by men and others were so made that they may enter the kingdom of Heaven."

Endocrinology had its earliest beginnings when the procurement of manpower for the harem was first effected. The highly specialized harem-guard served a unique purpose but he would hardly prove proper material for a military guard. As a result of Berthold's early work in 1849, it has been shown that a contentious, cocky, crowing rooster, when caponized, becomes a docile, quiet, fat fowl. When testes were transplanted, the fowl once more became aggressive and the cock-of-the-walk. It appears that personality, social attitudes, and the primitive instincts of fight, flight and self-preservation are greatly influenced by gonadal function.

Until recent years, man-made eunuchs were not uncommon. At one time, to preserve the sweet voices of the choir boys in a famous church of Rome, resort to castration appeared to be expedient. To meet with Matthew's bidding, voluntary castration has been carried out by some religious sects and also as a requisite for qualification in certain monastic orders. Today surgical castration is often practiced as an ameliorating measure for carcinoma of the prostate. But there are virile men who, even in this latter condition, refuse surgical castration, holding that the right to possession of their testicles is more dear than life itself. During the recent world conflict, surgical castration was at times necessarily performed because of the accidents of war. The profound changes in well being and personality, however, may be successfully averted today by the implantation of pellets of testosterone. The introduction during the war

years, of hard compressed pellets of pure crystalline testosterone along with the Kearns trochar and cannula for pellet implantation has been a distinct advance in endocrinotherapy.

Another advance of import during the war years was the appreciation of the psychosomatic aspects of endocrinology. It has long been known that the higher brain centers markedly influence hypophysial activity. The hypothalamico-pituitary mechanism plays an important role in endocrine balance. The remarkable increase in the fertility index of the populace during the period of the war may be placed under this heading. How else can account be made for the striking increase in the incidence of conceptions among women who had been barren for many years before the war? The general birth rate increased tremendously and the increase certainly could not be attributed to improved nutritional or living conditions. The exultation, the excitement, and the mass hysteria of war time may well have caused a stirring in the primordial brain stem which harbors the centers of our primitive instincts and emotions. Preservation of the race must be brought into balance with the loss of mankind in battle. Can it be that such a mechanism sets up pathways which favorably influence pituitary function?

Emotions such as great desire or fear may upset the target glands through a block in the hypothalamico-pituitary pathway. Consider, for instance, the menstrual irregularities which result from emotional disturbances due to dire fear or great desire. Witness the barren young matron who, obsessed with an intense yearning for conception, experiences a prolonged period of amenorrhea accompanied by morning nausea and abdominal bloating. Witness again the impeccable young lady who, during an amorous adventure, suffers a moral blackout. Then fear of pregnancy takes reason prisoner, and an amenorrheic episode follows. In both instances, amenorrhea terminates abruptly on the assurance of the physician that they have been laboring under a misconception. During the war, the incidence of functional amenorrhea amongst the women in the Armed Forces was high. Sher studied the causes of delayed menstruation in the Women's Auxiliary Air Force (British). He found that 139 out of 2312 air women developed amenorrhea lasting from one to seven months. Change of environment and varying emotional experiences no doubt played a role in bringing about an imbalance in the hypothalamico-pituitary relationship.

The responsiveness of the endocrine glands to reactionary deviations of the external environment introduces the question of the relationship of the nervous system to the endocrine glands. The pituitary is under hormonal and neural control. The secretions of the anterior pituitary are directed at its target glands, i.e. gonads, adrenal cortex and the thyroid. These in turn modify anterior pituitary hormonal levels, thus setting up a reciprocal relationship. The higher centers of the brain, however, through the hypothalamico-hypophysial pathways temper the activity of pituitary function.

Subject to re-interpretation in the light of this concept are the obesities in certain maladjusted individuals, exophthalmic goiter in persons subjected to repeated psychic trauma, menstrual disturbances in women experiencing distressing emotional episodes, endocrine imbalance in the tormented young woman with anorexia nervosa. None too obvious mental hurts are reflected in disturbances of bodily function, just as illness and disorders of the body condition shade every thought and action.

"We are not ourselves
When nature being oppressed commands the mind
To suffer with the body."

KING LEAR.

Little may be said of the progress made in endocrinology during the war years. It was a period of adjustment and an opportunity was afforded to reflect and digest the rapid advances made in the field before the war.

In retrospect, two salient facts stand out. One has to do with the unexpected incidence of endocrinopathies detected in men of draft age. Obesity, gynecomastia, undescended testes, all forms of enuchoidism, Frohlich's syndrome, hypothyroidism, hyperthyroidism, diabetes mellitus, etc. were uncovered with a frequency that proved surprising. The other has to do with the appreciation of the psychosomatic aspects of endocrinology, particularly the increase in the fertility index of the general populace to such an extent as to give the highest birth rate ever experienced in the United States.

ROBERT B. GREENBLATT, M.D.*

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Floral Eponym (46)

CORDIA

VALERIUS CORDUS, 1515-1544.

CORDUS was the son of the distinguished physician-botanist, Euricius Cordus. Botanists hold him in esteem because he was the "first to teach men to cease from dependence on the poor descriptions of the ancients, and to describe plants anew from nature." Medical men esteem him because he was the first to synthesize ether (1540). His lectures in Wittenberg on Dioscorides were so attractive that even the professors attended them. He died in Rome of malaria contracted while botanizing in the swamps of Italy. In his short life of 39 years, he laid the foundations of modern botany, introduced the pharmacopeia, and gave the first account of ether. There is no record in his life of love or emotion. Chauncey Leake suggests that he worked under the spell of romance, the romance of science itself.

Cordia is a large genus of tropical trees of the family of Boraginaceae. Many are important timber trees. C. Sebestena is a native of Southern Florida and tropical America. It is an evergreen tree, usually not more than 35 feet in height. It blooms most of the year. The scarlet or orange red bell shaped flowers are grouped in showy clusters.

SOME OTOLARYNGOLOGICAL TOPICS OF INTEREST TO THE INTERNIST*

WATT W. EAGLE, M.D.,†
Durham, North Carolina.

There are several otolaryngological subjects which we wish to discuss tonight, all of which we hope and think are of interest to the general practitioner and internist. These subjects, all of which will be scantily outlined are: sphenopalatine ganglion neuralgia, temporomandibular joint syndrome, acetanilid and bromide intoxication, elongated styloid process, and secretory otitis media. Some of these topics you may rightfully think are restricted to the otolaryngological field, but it is hoped in this discussion to bring out points whereby they are of interest to the general practitioner or internist. By no means do patients with these diseases always seek the services of the otolaryngologist first. On the contrary, they frequently consult their physician first—and rightly so, for after all he is the guardian of their health.

Sphenopalatine Ganglion Neuralgia: This disease is not a particularly infrequent one and perhaps is mistaken for other conditions more often than any other head ailment. These patients complain of headache and consider themselves to have sinus infection, and at times they are *told* that they have sinus infection. They think they have a serious disease of the eyes, the ears, or the mastoid. They do suffer an intense pain, even to such extent that they have been known to actually commit suicide. Many of these patients have had many unnecessary dental extractions, intranasal packs or other intranasal therapy, numerous maxillary sinus punctures and irrigations, and even many sinus operations have been done—all without benefit.

Sphenopalatine ganglion neuralgia is characterized by a pain—very often termed headache by the patient— which is located in the root of the nose, the orbital space or eyeball; then it extends backwards through the ear of the same side, sometimes with most intense pain just behind the mastoid region. Occasionally this pain extends on into the neck, the shoulder, the arm, and rarely on even into the fingertips. There is no particular rhythm in frequency nor duration. The pains may last for several days, but in some patients the duration is only a few minutes. The condition is confused with sinusitis and other diseases because the patient thinks he has a headache; but when he is asked whether he is suffering from a *pain* or a *headache*, he will invariably state that he has a *pain*. The pain is never above the level of the eye and the ear, which differentiates it from many other disorders, notably migraine. It is usually unilateral and always recurs on the same side. There is swelling of nasal membranes and an increased amount of nasal discharge on the side of the pain.

It has been found that any condition which causes intumescence of the nasal membranes may stimulate the sphenopalatine ganglion by the contact of one intranasal structure on the other, which, as has been known for a long time, is never tolerated.

It has been determined that 85 per cent of the patients having this disease have an intranasal deformity of some type, either septal deviation, a septal spur, or a prominent turbinate—all of which bring the septum and the middle turbinate, or perhaps the inferior turbinate, into contact. About 10 per cent of the cases are found to be caused by infections or intoxications, such as dental abscesses, acute sinus infections, involving the posterior group, and the various toxemias, such as acetanilid and bromide intoxications, or in some cases due to cachexia or anaemias. There are, finally, about 5 per cent of patients who have emotional disorders which cause swelling of the nasal membranes, stimulating the disease.

The diagnosis of sphenopalatine ganglion neuralgia is very easily accomplished simply by the application of cocain on the mucous membrane overlying the ganglion itself. The ganglion lies just above and behind the posterior end of the middle turbinate. Pain is usually relieved in one or certainly two minutes after application of the cocain. It may be difficult to reach the sphenopalatine ganglion with the applicator of cocain, due to deformities in the nose, and in such cases one has to depend on shrink-

*Read before the Lynchburg Academy of Medicine, April 8, 1946.

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ing the nose with 1 per cent saline solution of ephedrin sulfate or ¼ per cent neosynephrin hydrochloride and then spraying the nose with 1 per cent butyn sulfate, which is a local anesthetic. Migraine and the various intracranial disorders are not influenced whatever by the cocain or butyn.

The treatment of sphenopalatine ganglion neuralgia necessitates the removal of the cause, which entails either the removal of a septal spur, the performance of a submucous resection of the nasal septum, the crushing laterally of turbinates, the removal of dental abscess or the drainage of an acute infection of the posterior group of sinuses—the sphenoid or the posterior ethmoids. One observes a happy patient after the severe pain of sphenopalatine ganglion neuralgia has been relieved by some of these measures, and the cure is usually permanent. The opiates, or any other type of medication, are of very little benefit, regardless of the manner administered, for a patient having an attack of sphenopalatine ganglion neuralgia.

Temporomandibular Joint Syndrome: Apparently the dentist became interested in the temporomandibular joint from a clinical standpoint before the otolaryngologist. The dental literature contained several articles relative to this joint previous to 1920. Since 1925 there have been occasional articles in the medical journals, and especially the otolaryngological journals, relating the experiences of otolaryngologists with this disease. I am dubious of the opinion which the dental profession has about the importance of the temporomandibular joint syndrome, since I am led to believe, after discussing the subject with several members of the dental profession, that it is not so important a syndrome as the otolaryngologists attempt to make of it. However, it is a definitely recognized condition. Probably the reason dentists are not so interested as we physicians is because the patients having the disease do not return to see their dentists but instead go to see their physicians or otolaryngologists.

Without citing any cases of our observation, we wish to state the otolaryngologist's viewpoint, for we are continually and literally repeatedly beseiged with these patients and there is nothing we can offer them. We consider the disease a dental problem and, therefore, we feel compelled to return these patients to their dentists.

Up to 1935 we indexed these patients as having "temporomandibular joint strain", but after the subject was uncovered in the otolaryngological journals in 1935 we have diagnosed the condition as "temporomandibular joint syndrome". Most of our patients had unilateral symptoms.

The symptoms relative to tempormandibular joint syndrome are mainly those of impaired hearing, stopped up ears, tinnitus of low and buzzing type, dull pain in the region about the ears—worse on mastication—and dizziness. The dizziness at times is extremely severe and is the only complaint. There is never nausea, vomiting or falling to one side, which would probably suggest Meniere's disease. In addition to the symptoms just enumerated, some patients may complain of pain or burning sensations in the throat, in the cheeks, the nose, and also burning of the tongue. Headache is sometimes a complaint, the headache being located in the temporal and parietal regions, or certainly in the vicinity of the joints.

Usually the history of the patient reveals a rather clear-cut period of onset, which almost invariably relates closely to the time of dental extractions in the molar regions. Happily only a few people having molar extractions have the symptoms belonging to the syndrome. Some of the patients have had complete extractions in the upper or lower jaw, or both jaws; while others have had molar extractions in the upper or lower region only. As a rule, the patient having a part or all of the above group of symptoms has usually traveled the rounds of various physicians if he has had symptoms for any time, and a casual impression obtained by the physician stamps him as a neurotic individual. The pain or other symptoms to the patient, however, is quite real and severe and he usually obtains very little or no sympathy from the examining physician. It has never occurred to the patient to return to his dentist, and unless the physician is on his guard, he will let the neurosis imprint influence him to the extent of not recognizing the true condition and, therefore, the patient is not referred by him back to the dentist.

The diagnosis of tempormandibular joint syndrome is confirmed by the history of molar extractions, which is shortly followed by any one, or the entire group, of the symptoms just enumerated. The diagnosis is further substantiated by palpating the temporomandibular joint with the patient opening and closing the mouth, which will elicit pain over the joint. Some of the patients have such intense

pain that they refuse to open the mouth and have subsisted on liquid diets alone, and they may have lost considerable weight, and may suffer from avitaminosis. The patient may be relieved of dizziness by inflations of the eustachian tubes, which also relieves the impaired hearing and sensation of fullness in the ears, but unfortunately this freedom of symptoms is of very short duration and by no means permanent. The most accurate method of diagnosis of the condition is that of eliminating the symptoms by inserting rubber tubing, a flat cork or any other material—about one-sixth to one-quarter inch in thickness—between the anterior teeth to hold them apart, if they are present; or a much thicker object between the alveolar processes if the patient is edentulous. Within a period of fifteen to thirty minutes the patient is relieved of the symptoms. This is considered a pathognomonic sign.

The production of the syndrome is rather simple and is due primarily to the allowance of loose play of the condyles of the mandible in the glenoid fossa. This change in joint function is caused by relaxation of some of the muscles and the contraction of others which are attached to the mandible. Eventually the joint cavity becomes enlarged and erosion itself of the glenoid fossa occurs. Patients having headaches are thought to be those individuals having the most erosion in the glenoid fossa, or certainly to the extent that the thin plate of bone in the middle cranial fossa is thinned out by the loose play of the condyle, and the dura has become irritated. Patients having pain and burning in the temporal and auricular regions are those patients wherein the auriculo-temporal nerve is pinched. The auriculotemporal nerve branches off from the mandibular nerve and runs medially to the condyle and may be easily injured by compression. Those patients having dizziness have had a definite occlusion of the eustachian tube, which is more or less permanent, producing the typical symptoms of eustachian tube obstruction—such as tinnitus, impaired hearing, stopped up ears, and dizziness. Inflations of the tubes can produce only temporary relief because the pressure on the eustachian tube is continuous by the backward tilt of the condyle. Absorption of the air that has been inserted into the middle ear following catheterization of the eustachian tube is rather immediate, the vacuum recurring. It is absolutely impossible to inflate the middle ear on a few of these patients. It has been established that the pain in the tongue is due to irritation of the chorda tympani nerve in those cases where there is extensive erosion of the joint cavity.

The treatment of temporomandibular joint syndrome is that of providing a permanent method of stabilizing the condyles in the glenoid fossa. This can be accomplished only by building proper dentures, entailing the necessity of building the molar regions quite high in the dentures, or certainly to the extent that the original teeth presented—the keeping of the jaws apart in the normal position and allowing no over-bite at any time. If the condition has persisted for a long period of time and much atrophy and erosion of the glenoid fossa have occurred the results will not be as dramatic and satisfactory as those of a shorter duration.

The otolaryngologist and the physician are entirely helpless in relieving these patients' symptoms. It is entirely a dental proposition. It is our duty as physicians to recognize this condition and to refer the patient back to his dentist; and if proper dentures are not fitted and they again return to us, it is *again* our duty to refer them back to their dentist.

Acetanilid and Bromide Intoxication: It has been said with considerable truth that one of the most common afflictions of the human race is that of headache, and it is perhaps one of the most common causes of patients seeking their physician's advice. However, there are numerous patients who do not consult their physician, and who, during the recent war, were unable to see a physician, who resorted to self-medication. If one listens to the radio and reads the advertisements in the newspapers and magazines, or observes the placards on the highways, he is likely to be inveigled into some type of proprietary medication for headaches, if he has headaches. Practically all headache preparations contain acetanilid and bromides as their main constituents. Acetanilid or bromides, alone or combined, are good drugs, and because they do provide such immediate relief of a pain or headache, are only too frequently over-used. The Federal laws now require the manufacturers to state on the package that they are habit forming drugs and injurious if too often repeated. There are certain individuals, however, who never follow any directions given, and these are most likely the same patients who have some organic disturbance as the cause of their headache. Eventually the patient finds he can not do without the drug. In a short

period of time, depending on the individual's mode of living, headaches may develop which are in addition to the headaches he originally complained of. These headaches are produced by the drugs and may be more severe than the original headaches.

Bromides by prolonged use will likely produce headache, and even a skin rash may occasionally occur. Acetanilid by repeated doses produces cyanosis of the mucosae and conjunctivae because the blood is no longer able to carry oxygen as it formerly did. These patients have headaches due to the resultant anoxemia. Sulf-hemoglobin and methemoglobin are formed in the blood. When the bromide replacement test is done, one may find variable results. This is due to the fact that a person eating large amounts of salt—sodium chloride—on his food may have no replacement of the chlorides by the bromides, although he may have taken large amounts of the headache preparations. Conversely, there are some individuals who have a marked replacement of the chlorides by the bromides because his intake of chlorides is minimal. Some of these patients may take only small amounts of bromides. It is a peculiar fact that most individuals who take headache preparations—such as the textile workers, the factory workers of any type, laboring people, or those who do close work with their eyes, are the individuals who eat very little salt.

It has been usually stated that a person's cerebral activity is diminished if he has a blood bromide content of more than 50 mgms. per cent. In the Southern States it is not uncommon to find 13 per cent or more of all patients admitted to the hospitals for various causes to have positive blood bromide tests, and that half of these patients have around 50 mgms. per cent or more bromide content of the blood. It is then not too difficult to understand why there are so many patients seeking admission to psychiatric hospitals. It has been found that from 3 per cent to 25 per cent of all patients in psychiatric hospitals have blood bromides on admission to the extent of toxicity.

Acetanilid poisoning is treated simply by the discontinuance of the drug. Brominism is treated by the ingestion of salt—plain sodium chloride—in large amounts, which in turn causes the patient to drink more water, which eventually will rid the blood stream more quickly of the accumulated bromides. It requires several weeks before the symptoms of bromide and acetanilid intoxication disappear. Mental confusion and slow cerebration may exist over several weeks to months duration. Patients having these intoxications must definitely understand they must not take any more preparations containing bromides and acetanilid, and it is important that relatives of the patient must cooperate to the extent of keeping all of these preparations away from the patient.

One wonders why this topic is mentioned from an otolaryngological aspect. It is simply because the otolaryngologist sees so very many patients with bromide and acetanilid intoxication seeking relief for headaches which the patient thinks are due to sinus infection. The otolaryngologist who is alert will not be misled and he will discover the patient's true condition. Artificial light during the examination is not satisfactory, since the cyanosis of the lips does not show up well. Ladies must be asked to remove their lipstick in order to see cyanosis. If fingernails are covered with polish, it is likewise impossible to note cyanosis.

At times it is very difficult to obtain a good history from these patients because they are reluctant to admit using these preparations. They may finally admit taking "one or two per day" but eventually may confess to ingesting up to twenty per day. It is important that these patients have no surgery performed because they are neither in physical nor mental condition for an operation, and healing would certainly be very delayed by the poor oxygen-carrying blood.

Elongated Styloid Process: About 1933 we became interested in a fairly rare condition insofar as clinical symptoms are exhibited. Anatomically elongated styloid processes had been found in about 4 per cent of individuals, but symptoms certainly have not appeared clinically in 1 per cent. Their presence is never known unless they are symptomatic. The normal styloid process is about 2½ cm. (1 inch) in length and is attached to the temporal bone on the inner surface of the mastoid just lateral to the jugular vein. Its origin is just medial and anterior to the stylo-mastoid foramen, through which the facial nerve makes its exit from the skull. The styloid process then runs forward and downward and lies immediately beneath the faucial tonsil. These styloid processes, even if elongated, never cause any trouble unless the tonsils have been removed. During tonsillectomy the operator may encounter the elongated styloid process when a needle for suturing a blood

vessel may strike the elongated bone, causing the needle to break, with ensuing difficulty in finding and removing parts of the needle.

The main symptoms of elongated styloid process follow immediately after the tonsillar operation. Patients will claim that their throat never healed properly following tonsillectomy. They will return to their specialist or to their physician, trying to find the cause of their sore throat. Not only do they have sore throat, but, in addition, they complain of pain in the ear and pain on swallowing. Usually one side only is involved, but there are a considerable number of patients where the symptoms are due to bilateral elongated styloid processes. Many patients may have bilateral elongated styloid processes, but only one of these may cause symptoms. Spasm of the constrictor muscles of the esophagus has been found due to an elongated styloid process. The symptoms are due to the tenseness of the mucosa in the pharynx over the elongated styloid process, which involves the stimulation of terminals of the glosso-pharyngeal nerve. The condition is not to be confused with glossopharyngeal neuralgia which is stimulated by heat, cold, or the act of swallowing, and is a lightning-like type of pain.

The diagnosis of elongated styloid process is easily made by palpating the tonsillar fossa. If a bony resistance is met in the fossa, it has to be an elongated styloid process, and the palpating finger is on the tip of the styloid process. The patient winces from pain, and his symptoms of pain in the ear and other local pains are reproduced.

The disease is treated by a shortening of the elongated styloid process. This is accomplished by an incision through the tonsillar fossa, spreading the muscles, exposing the styloid process, clipping the stylo-hyoid ligament—which also sometimes is calcified—and then with a strong rongeur the bone is broken. A clamp should be on the distal portion of the styloid process, for if all the muscles have not been stripped off the process, the muscular pull will draw it out of sight into the muscles, and it may be very difficult to relocate it for removal. The main difficulty with the operation is that working through the mouth restricts the field of vision, instrumentation and palpation.

The results of shortening of the styloid process are phenomenal and uniformly good. Patients who have had nagging or severe symptoms are completely relieved. Convalescence is rapid and easy, since sulfa drug powders are left in the wound and the wound is sutured tightly. Therefore, the operation is not followed by the severe sore throat one sees following tonsillectomy where a large open wound is subject to secondary infection.

It is, therefore, to be remembered that a number of the so-called sore throats following tonsillectomy are not in reality infections at all and that a palpating finger in the tonsillar fossa may reveal the true cause of the symptoms complained of by the patient. Surgery alone to shorten the elongated process can relieve this patient's symptoms.

Secretory Otitis Media: Within the past five years what we must consider an altogether new disease has evolved. Up to 1940 one occasionally saw a patient having a fluid level in the middle ear, or even bubbles of air in the middle ear. The condition in the past was termed "catarrhal otitis media" and the patient was usually treated by eustachian tube catheterizations and inflations, but more often simply by the use of ear drops. Those patients having bubbles in the middle ears were usually those individuals who had a habit of sniffing the nose—that is, forcefully inhaling air through the nose which deflated the middle ears. Eventually the eustachian tubes would open when the patient swallowed and air would rush into the middle ear, churning the fluid into bubbles.

We know that catarrhal otitis media is similar in appearance and symptoms to a disease which we now call "secretory otitis media". We are suspicious, however, that secretory otitis media is caused by a *virus*. Our reason for suspecting a virus disease is that there has been a progressive increase in the frequency of the disease since 1940. For instance, in 1941 we observed only 7 cases, while in 1945 we observed many more than 100 patients with the disease. In this disease a transudate of fluid, very thick and tenacious or viscid, collects in the middle ear, and there is an associated obstruction of the eustachian tube. There is no proved association with head colds or respiratory infections of any type, and neither have we been able to associate it with sulfa-drug therapy or any other factor. We have, however, found the disease to occur more often in the cold months of the year.

Secretory otitis media is characterized by a painless onset of impaired hearing of a muffled type,

that is—an impairment of clarity of hearing as well as acuity—a tinnitus of high pitch, which some patients describe as sounding like telephone wires singing on a winter day. They also have a sensation of fluid shifting in the ear as the head is moved, and they may have marked dizziness.

The diagnosis of this disease is made by the history, which is typical in all cases, and the finding of a normal—or essentially normal—ear drum and observing the fluid in the middle ear. The light cone on the ear drum may be a little dispersed but otherwise normal. The fluid behind the drum may show a definite level, which shifts as the head is moved or turned, acting similarly to the alcohol bead in a carpenter's level. Or one may find the middle ear so completely filled that one gets an opaque appearance behind the drum. The drum is never found to bulge. If the fluid has been present for some time, there may be some retraction of the drum. After seeing several ears containing fluid, one has very little future trouble in diagnosing a middle ear filled with fluid.

When the drum is incised with a sharp knife, there is very little pain experienced—not much more than a hypodermic needle. This is because the normal ear drum is not nearly so painful as the inflamed ear drum. No anesthesia of any type has been found necessary except for children below 6 years of age, and there the general anesthesia is necessary for the aspiration of the fluid. As the myringotomy is performed, the patient hears gurgling noises in the ear and the operator may see the bubbles of air going into the middle ear. No fluid ever exudes from the myringotomy opening, and for this reason it is very necessary to use a small metal aspirator, applying it directly over the incision. The fluid then is aspirated easily, and quite a swishing noise is made as it is aspirated. The fluid is usually very thick and tenacious and is quite similar in appearance and consistency to castor-oil or bees honey. It is never purulent and cultures are negative. There is no discharge from the ear afterward and the myringotomy wound heals immediately. The patient has immediate restoration of the sensation of a normal ear. There are a few individuals where the fluid is so thick and tenacious that a counter incision must be made more anteriorly on the drum so that air may be pulled through the middle ear from the second opening made in order to displace the thick fluid.

The results of myringotomy and aspiration therapy for secretory otitis media are uniformly excellent, although there may be a few patients who have recurrence of the fluid on one or two occasions. There seems to be a trigger-like mechanism whereby the eustachian tube opens spontaneously following myringotomy and aspiration of the fluid. There have been a few patients who have had a more prolonged recurrence of the fluid, but these are the individuals where catheterizations and inflation of the eustachian tube were done. We learned by experience not to use instruments on the eustachian tube in order to obtain the quickest healing.

Most patients have had the disease for only a short period when seen, but there are some patients who apparently have had the disease for a long period of time, even to the extent of marked retraction of the drum occurring and beginning of organization of the discharge in the middle ear. These patients require more myringotomy and aspiration treatments than those of shorter duration. If myringotomy is not performed, there will eventually be a permanent deafness due to what we generally term adhesive otitis media, wherein the drum is bound down by adhesions to the other structures in the middle ear.

This condition is found in children, as well as elderly adults, and the disease is of interest to the pediatrician and the internist, as well as the otologist. It is *necessary* for all physicians to be able to diagnose the disease. It is *very necessary* to incise the drum, and it is *absolutely necessary* to use an aspirator for removal of the fluid in secretory otitis media.

RECENT DEVELOPMENTS IN GASTRIC SURGERY*

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The greatest advances in gastric surgery in recent years have not been so much along the technical line but in the pre- and post-operative care of the patient and a more careful selection of the time of operation. The use of sulfonamides and penicillin, and the freer use of transfusions and intravenous fluids with early post-operative feedings by means

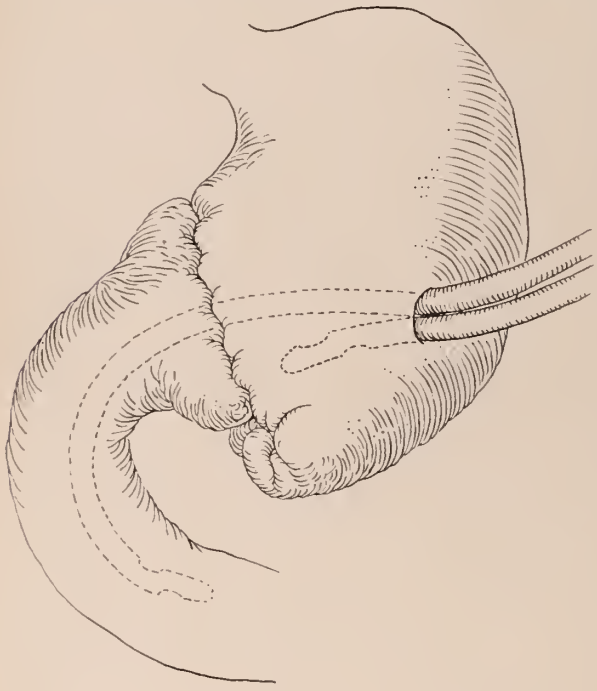


Fig. 1. Drawing showing position of gastrostomy and transgastric duodenostomy tubes at the completion of a partial gastrectomy. The duodenostomy tube is well past the suture line and can be used for feeding on the third or fourth post-operative day.

of a transgastric duodenostomy or transgastric jejunostomy (Fig. 1) have done much to lower the mortality and morbidity in gastric surgery.

Gastric lesions requiring surgery may be divided into two types, namely, benign and malignant. Of the benign lesions ulcer and its sequelae are the most frequent reasons for surgery, while cancer is most often the type of malignancy found at operation. Numerous operations for ulcers of the stomach and duodenum have been devised, but on account of the poor results most of these have been abandoned and surgery for uncomplicated duodenal ulcer is almost a thing of the past. All such ulcers, particularly those in young people, should be given medical treatment for several months with repeated x-ray studies to follow the course of the ulcer. Ulcers of the duodenum can be given a much longer trial and unless there is obstruction, hemorrhage, or perforation, operative intervention is usually contraindicated.

Recently Dragstedt[1] and his co-workers have obtained excellent results with bilateral vagotomy, either above or below the diaphragm in the lower part of the esophagus. It is too early to evaluate accurately this work, but in all probability it will be a distinct adjunct in those cases of duodenal ulcers which are resistant to medical treatment or in the recurrent post-operative duodenal or gastrojejunal ulcers.

Resection of the vagus, particularly the gastric portion of the left vagus, has long been practiced at St. Elizabeth's Hospital,[2,3] and we have always considered it a definite aid in persistent types of ulcers. The more radical operations now advised would seem to give better results.

Benign polyps and diverticula of the stomach should be operated upon, particularly diverticula that show retention of barium by gastro-intestinal x-ray studies. It is quite difficult to make a definite diagnosis of a benign growth in the stomach, and in all probability if a polyp is present a partial resection of the stomach or very wide resection of the base of the polyp would be the operation of choice. Diverticula of the stomach are usually found on the lesser curvature near the esophageal gastric junction and are often difficult to locate at the time of operation, even though they appear quite large by x-ray examination. When located, simple excision of the sac, including all of its layers, is necessary for operative cure. In version of the sac with suturing of the serosal and muscularis layers to produce invagination is not advisable, as this will often produce cardiospasm and the patients will not be relieved of their symptoms.

An ulcer of the stomach which does not heal with adequate medical treatment should be explored, and

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on account of the possibility of the ulcer becoming malignant it seems wisest to resect these cases, treating them as if they were malignant. In malignant tumors of the stomach, surgical resection is the only approved treatment. Radiation therapy is of little value in this type of lesion, and when used in the extensive inoperable cases has not seemed to prolong life or relieve symptoms. In fact, many cases seem to be more uncomfortable during the last few months after having received this therapy than those who have not had it.

In the extensive malignancies of the stomach a wide resection gives the only hope for cure, and with the improved technic and pre-and post-operative care total gastrectomy is now done not infrequently with many reports of three and five-year cures. The post-operative feeding in total gastrectomy cases does not seem to be quite the problem that it was considered when this type of operation was first being done. With the various vitamins and concentrated foods these patients can be kept in vitamin, caloric and mineral balance at home and often return to some useful occupation.

Pre-Operative Preparation: When gastric surgery seems indicated, a careful estimate should be made of the patient's physical condition, with an accurate determination of the hemoglobin, blood counts, total plasma protein, and kidney function. Any deficiencies in these should be corrected by blood transfusions, infusions of plasma, or intravenous dextrose and Ringer's solution. As many of these patients have been on a restricted diet, either prescribed or voluntarily imposed, concentrated vitamins should be given for several days. Both the free and combined acidity of the stomach should be determined within a week or ten days before operation and if there is no free hydrochloric acid this should be given with meals. If lavages are necessary, the stomach should be washed out with .2 of 1 per cent hydrochloric acid, and forty-eight hours before operation the patient should be given this solution as drinking water. It has been found by many years' experience that this definitely diminishes the bacterial flora in the stomach where there has been a lack of free hydrochloric acid. When there is gastric retention, frequent gastric lavages should be done so that the size of the stomach will return to normal and the tone of the masculature will improve. In some cases of duodenal or pyloric obstruction food has been found that was taken one or two weeks previously. For several years these patients were given some type of sulfonamides for 36 to 48 hours before operation. It was thought that this would reduce any potential respiratory infection and lower the activity of any bacteria which might be present in the respiratory mucosa and subsequent secretions. Recently penicillin has been substituted for the sulfonamides, and 20,000 units of penicillin are given every three hours for a day or two before operation. Since using penicillin pre-operatively the post-operative respiratory complications have been definitely decreased. Penicillin is also continued post-operatively for four or five days.

Anesthetic: The type of anesthetic to be used is most important in these cases. For the average individual who is not over 60 years of age and when there is no contra-indication, intratracheal ethylene-ether anesthetic is the one of choice. By using this type, a smoother anesthesia may be obtained as it produces less movement of the diaphragm and likewise of the abdominal viscera, and relaxation is afforded with a small amount of ether. If more relaxation is necessary, either local infiltration of the abdominal wall with ½ per cent novocain solution or the intravenous administration of curare may be used. In elderly and poor risk patients the entire procedure is carried out by local infiltration, using ½ per cent novocain in the abdominal wall and also in the retro-peritoneal space. This is supplemented pre-operatively with hypodermic injections of morphine and scopolamine. With an adequate dose of these two substances, elderly patients will often sleep through the operation except during the infiltration of the abdominal wall and will frequently have complete amnesia regarding the operation. The use of intratracheal anesthetic has the additional advantage in that at the completion of the operation the tracheal and bronchial tree can be readily aspirated of all mucus before the intratracheal tube is removed, and not infrequently 10 to 30 c.c. of thick, tenacious mucus is obtained at this time. Without aspiration this mucus would stay in the bronchial tree, as the patient is usually unable to cough it up for at least 24 to 36 hours.

Operation: The types of operation may be divided into three classes: pyloroplasty, gastro-enterostomy, and gastrectomy. In the decade beginning in 1920, pyloroplasties received much favorable

comment and were frequently done, particularly in those cases with obstruction, or ulcer of the pyloric sphincter or first part of the duodenum. However, in the follow-up of these cases the results have not always been desirable, since there have been a number of recurrences requiring further operative intervention. Regardless of the type of pyloroplasty that was done, approximately the same results were obtained, and now this type of operation is done very rarely. Gastro-enterostomy has also fallen into disrepute as the procedure for gastric and duodenal ulcers, as almost invariably following such an operation in those patients with high acid a gastrojejunal ulcer developed which was a more serious complication than the original lesion, and the treatment of this condition was difficult and unsatisfactory. However, gastro-enterostomies are still worth while and are indicated in certain types of cases. In elderly people with a low acid and pyloric obstruction from old ulcers, a gastro-enterostomy can be done with less trauma and manipulation than a resection, and with good results. Gastro-enterostomy may also be indicated in other obstructive lesions of the duodenum.

Resection of the stomach with removal of the pyloric sphincter and the first few centimeters of the duodenum is the type of gastric operation which gives the best results for both gastric and duodenal ulcers or malignancy of the stomach. If the lesion involves the entire stomach or the greater part of the cardiac end of the stomach, total gastrectomy may be indicated.

It is not the purpose of this paper to discuss the operative technic, but suffice it to say that in our hands a modification[4] of the Billroth I type of operation has given the best results, as this re-establishes the normal continuity of the gastro-intestinal tract, and when it can be carried out satisfactorily the incidence of recurrence of ulcers is definitely less. However, there are certain limitations to this operation, and occasionally the Billroth II type with one of its many modifications may be necessary.

In the post-operative care of these patients it is necessary to keep the stomach empty for several days to prevent distention, and as there is often no tone of the gastric muscles and some swelling of the gastric mucosa at the suture line, frequent lavages are necessary. In 1932 we discontinued gastric lavage with a large hard rubber tube and in its place used a smaller Jutte tube which was inserted in the nostril and left in place until the stomach emptied. While this gave very good results, it often caused irritation of the pharynx and also prevented the patient from coughing, thus producing respiratory complications. In 1938 Dr. J. Shelton Horsley started using a tube gastrostomy[5] which replaced the nasal gastric tube. We found that with the use of the tube gastrostomy the patients were much more comfortable, could be moved more readily in bed, and irritation of the pharynx was prevented. This tube is placed in the anterior wall of the stomach through a stab wound and is brought out to the left of the abdominal incision. It is held in place with two rows of purse string sutures and the stomach is separated from the anterior abdominal wall by a tag of omentum. The tag of omentum prevents permanent adhesions between the gastric and abdominal walls and also prevents leakage of the gastric contents when the tube is removed. In the past three years, in addition to this tube, we have been using a second tube placed through the same stab wound and carried down into the jejunum or duodenum, depending upon the type of anastomosis that has been done. On the third or fourth day this tube is used for feeding. By using the gastrostomy and enterostomy tubes, the patient loses less fluids, and if the stomach does not empty readily, material aspirated from the gastric tube may be injected into the enterostomy tube in addition to the concentrated proteins which are being fed into the lower tube.

In gastric cases, as in all abdominal surgery, we have felt that retention sutures should be used in closing the abdominal wounds. By using through-and-through s.w.g. or zytor sutures we have had no post-operative dehiscence of the wounds.

Post-Operative Treatment: In post-operative treatment penicillin, which was started before operation, is continued for four or five days, or until the temperature and pulse return to normal. The gastrostomy and enterostomy tubes are kept open for the first 48 hours. At the end of the third or fourth day feedings of concentrated proteins are started in the enterostomy tube. These are gradually increased until about 90 c.c. are given every two hours. As a rule, the stomach starts emptying on the fourth to sixth day, but before the stomach

begins emptying, water and clear liquids are started by mouth. Patients are allowed to have small amounts of water immediately after operation and on the second day, tea and ginger ale and clear liquids may be added up to 60 c.c. an hour. This seems to give comfort to the patient, and as the gastrostomy tube is kept open there is no chance of any gastric distention. As soon as the stomach begins emptying, cooked cereals along with malted milk and soft cooked eggs are started. We feel it is important that a diet high in proteins be given, as this reduces the edema of the suture line and hastens the rapidity of the healing process. Fluids are supplemented as necessary by the intravenous



Fig. 2. X-ray of Case 1 showing 90% gastric retention at the end of six hours, resulting from duodenal obstruction caused by scar tissue from chronic duodenal ulcer.

route, and one or two transfusions are usually given post-operatively, the first being given immediately after the patient is returned to his room following operation. Vitamins are continued either intravenously or intramuscularly until the third or fourth post-operative day, at which time they are either added to the enterostomy feedings or given by mouth. These patients are usually up on the twelfth to fourteenth day and are discharged from the hospital from the eighteenth to twenty-first post-operative day.

Four illustrative cases are as follows:

Case 1. Mr. J. L. Mc., age 70 years, gave a history of indigestion over a period of many years. He was first known to have a duodenal ulcer three years before this admission to the hospital, and had been on medical treatment with only partial relief of symptoms. On admission to St. Elizabeth's Hospital in November, 1945, he was definitely underweight and had a mild degree of anemia. X-ray examination showed 90 per cent retention of the gastric contents (Fig. 2). He remained in the hospital for several days on treatment and was given a blood transfusion and frequent gastric lavages. Operation was done five days after admission, using local-ethylene anesthesia, and complete obstruction of the duodenum was found resulting from the scar of an old duodenal ulcer. There was no evidence of malignancy. A posterior gastro-enterostomy was done. The patient made a very satisfactory convalescence and was discharged from the hospital three weeks after operation, at which time he was on a bland diet and his hemoglobin had increased to 78 per cent, r.b.c., 4,000,000. Six months later he reported that he had gained ten pounds in weight and was feeling better than he had felt for several years.

Case 2. Mr. O. L. S., age 64 years, was admitted to St. Elizabeth's Hospital in February, 1946, complaining of indigestion and occasional abdominal distention. He was known to have had an ulcer for twelve years and for the first part of that time his symptoms were satisfactorily controlled with dietary means, but in the last six months his pain and indigestion were almost constant. X-ray examination on hospital admission showed a gross deformity with spasm in the first portion of the duodenum and also numerous diverticula in the descending colon and sigmoid. On February 26, 1946, under ethylene-ether anesthesia, he was operated upon and a large ulcer was found in the first portion of the duodenum (Fig. 3). The crater of the ulcer was 1 cm. in diameter and the ulcer had penetrated into the head of the pancreas. A partial gastrectomy was done, using the Horsley modification of the Billroth I. The patient made a satisfactory convalescence and was discharged from the hospital twenty-one days after operation.

He has returned to his usual duties and, though he is on a bland diet, he has had no further symptoms.

Case 3. Mr. J. F. W., age 54 years, complained of pain and nervous indigestion for twenty years, which had increased in severity during the past few years before admission to St. Elizabeth's on April 16, 1940. X-ray examination showed an obstructive lesion of the pylorus which was thought to be extensive carcinoma of the stomach in spite of free hydrochloric acid in each specimen of the gastric contents examined. At operation four days later, a hard, indurated lesion was found in the pyloric end of the stomach. There were no enlarged lymph nodes, but a small piece of omentum was adherent to the anterior part of the growth. The Horsley modification of the Billroth I was carried out, resecting about two-thirds of the stomach and the first portion of the duodenum. The specimen showed an indurated area in the pyloric end of the stomach, in the middle of which was a large ulcer 2½ cm. in diameter and 1 cm. deep (Fig. 4). Microscopic examination showed scirrhous carcinoma, grade 3. The patient made an immediate satisfactory convalescence and within eight weeks gained from 182 to 240 pounds, which he said was his usual weight.



Fig. 3. Photograph of the pyloric end of the stomach and first portion of the duodenum of Case 2, showing ulcer which has penetrated into the head of the pancreas.



Fig. 4. Specimen from Case 3 showing extensive carcinoma of the stomach with portions of the omentum adherent to the lesion. Specimen consists of two-thirds of the stomach and several centimeters of the first portion of the duodenum.

He worked regularly for twenty-one months and at that time noticed a recurrence of his indigestion and loss of weight, but there was an increase in the size of his abdomen. He had alternate spells of constipation and diarrhea, and was re-admitted to St. Elizabeth's Hospital in February, 1942. The

physical examination at that time showed a greatly distended abdomen. A paracentesis was done and 350 c.c. of clear fluid withdrawn. X-ray examination showed partial obstruction of the colon which was thought to be due to recurrence of the malignancy. Exploratory operation done at this time showed numerous metastatic nodules throughout the parietal peritoneum. Microscopic examination of one of the nodes showed grade 3 adenocarcinoma with the same histologic appearance as that found at the original operation. The patient died one month after the last admission to the hospital.

This case shows the necessity of operating upon all ulcers of the stomach which do not become symptom-free after a few months of medical treatment. As mentioned above, this patient had had symptoms for twenty years.

Case 4. Mr. R. J. R., age 67 years, was admitted to St. Elizabeth's Hospital on March 14, 1946, complaining of epigastric pain which had been present at intervals for 12 years. He had been on a special diet most of the time with only partial relief. Two years previously his appendix had been removed without relief of his symptoms. At that time, however, he complained of pain in both legs and feet, particularly in the left leg. Gastro-intestinal x-ray examination showed a large ulcer in the lesser curvature of the stomach which was thought to be extensive carcinoma.

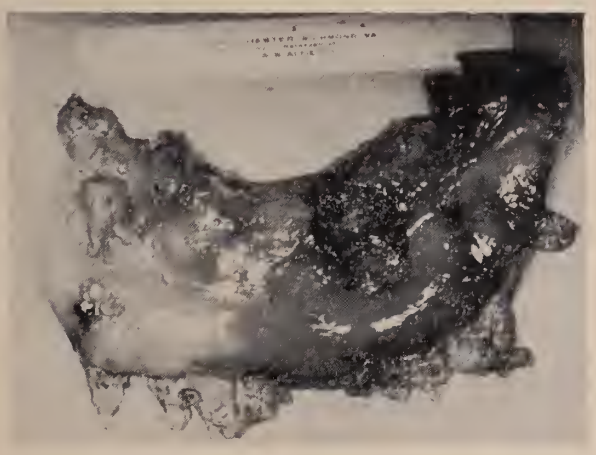


Fig. 5. Photograph showing the entire stomach with a small portion of the esophagus and several centimeters of the duodenum from Case 4. A large indurated mass can be noted in the mid-portion on the lesser curvature near the cardiac end of the stomach.

At operation four days after admission to ... intratracheal ethylene-ether anesthesia, there was found a large lesion in the mid-portion of the stomach on the lesser curvature, with the induration extending to within ½ cm. of the esophagus (Fig. 5). A total gastrectomy was done, closing the duodenum, joining the esophagus to the jejunum by an end-to-side anastomosis, and doing an entero-enterostomy on the afferent and efferent loops of bowel. The patient made a very satisfactory convalescence for the first week or ten days and then began complaining of pain in his left leg. In spite of sympathetic injections and the use of papaverin hydrochloride his left foot became gangrenous and three weeks after his original operation an amputation of the left leg in the mid-thigh was done. His convalescence from that time was satisfactory and he was discharged from the hospital three weeks after the second operation. Since then he has been able to be up and around his room, has gained strength and weight, and seems to be feeling quite well.

SUMMARY

1. Recent advances in gastric surgery are reviewed, giving the technic and advantages of gastrostomy and transgastric enterostomy.
2. The pre- and post-operative care of gastric cases is discussed, including the use of sulfonamides, penicillin, and intravenous medications.
3. Four cases are reported, illustrating the different types of operative procedure.

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while the wools from the lambs receiving limed and phosphated hay remained fluffy and lost only 24 per cent. Regardless of the chemical or physical differences in the wools, it is significant that a simple treatment applied to the soil has not only been reflected in increased yield of forage but when fed to sheep has brought about differences in rate of gain and altered the physiology of the animals sufficiently to be observed in the appearance and quality of the wool."

Referring to the increase in nervous disorders, Shield[5] says, "His capacities to withstand trauma —to avoid susceptibility to infection—to survive infection—to evolve through situations—are dependent on his perfection of development. This perfection of development of man is primarily sustained by his food. The quality and quantity of nutriment either help or hinder his development. The maintenance of man's capacity to function is dependent upon several factors, but one that is absolutely indispensable is nourishment. The health of man and consequently, his efficiency, is dependent on his state of nutrition."

The following is a quotation from the speech of The Earl of Portsmouth in a debate in the House of Lords on February 2, 1944: "Positive health, in my opinion, and I believe in that of most of those who have thought deeply upon this question, must begin in the womb and indeed in the womb before conception starts, with the health and vitality of the mother. In that connection, the doctors working in the Peckham Health Center discovered that feeding the families in the center with the ordinary so-called balanced food diet bought from the shop was not enough. The vitamins and so forth in the ordinary analysis of such vegetables as spinach and in such food as milk were not there; the vitality was not there; and they were forced to turn then to their own farms. They were forced to grow the food themselves, so as to get the beginning of positive health in the unborn child. . . . They were forced to use not new methods but the ancient method of returning waste to the soil and creating humus."

In referring to studies on the relation of vitamins in the soil with organic matter in the soil, Shield[5] states, "These findings point to the fact that riboflavin and minerals in the plants may depend upon the humus and mineral content of the soil. Such observations suggest that the quality of the plant is dependent upon the fertility of the soil; thus optimum soil fertility predetermines that the plant will have the potential source from which it can possess optimal food value." He further states, "We in medicine are interested in optimal health and in psychiatry; we are vitally concerned with malnutrition as it affects psychobiology. It is for this reason that we find ourselves today interested in the source of malnutrition—soil. an impoverished soil, as a cause of an impoverished people with psychopathological complaints."

The soil fertility on a farm can be depleted enough in one generation to change it from a profitable farming enterprise and a place of good health to one of low standard of living and poor health. Farms that once provided good crops of red clover and alfalfa 50 years ago have been so depleted of the phosphorus, calcium, potash and boron that today timothy, herds grass and other low mineral requirement crops are grown. Soils that at one time produced good growth of crimson clover as winter grazing for hogs and other livestock in Eastern Virginia are now growing rye, lespedeza and crab grass. Many of our one time blue grass sods are now composed largely of wire grass, herds grass and other low mineral requirement crops. The reason is very evident after comparing the mineral content of these crops as given by Morrison.[6]

	Calcium	*Phosphorus*	*Potash*	*Total*
Alfalfa	1.43	0.21	2.02	3.66
Red clover	1.21	0.18	1.89	3.28
Crimson clover	1.31	0.20	1.86	3.37
Blue grass	0.30	0.22	1.26	1.78
Lespedeza	0.99	0.19	0.84	2.02
Herds grass	---	0.19	1.56	1.75
Rye*	---	---	---	---
Timothy	0.14	0.06	0.56	0.76
Crab grass*	---	---	---	---

*Only trace.

It has been a tendency to shift to crops with lower mineral requirement instead of replacing the minerals in the soil. In most of the experiments conducted by our Experiment Station, the main emphasis is placed on increased bushels per acre or tons per acre without considering the possibility that the new high yielding varieties may be actually lower in total mineral content. According to results given in "Soils and Men." the mineral content of different varieties of wheat, corn and potatoes and other crops grown on the same soil may show as much variation as plants of entirely unrelated species. There were also many results of experiments

given which definitely show that the mineral content of the plant can be definitely increased by the application of minerals in the soil.

Larger crops are being grown on soils with the application of pure salts of nitrogen, phosphorus and potash which tends to cause plants to use up more and more of the other elements in the soil. Early in the development of agricultural science, pure salts were not as widely used which helped to replace some of these minor elements. For example: In early colonial days a fish was placed in each hill of corn, large quantities of fish and guano or bird manure, cotton seed meal, all of which, contain many of the minor elements, were used as fertilizer. A majority of the phosphorus was obtained from compounds containing sulphur and the sources of potash contained magnesium. Today the tendency is toward pure salts as a source of nitrogen, phosphorus and potash. Is it not natural that more and more deficiencies will be found? They are being found in both plants and animals.

The fact that animals will gain more weight on the same quantity of feed grown on soils supplied with limestone and phosphate than with feed grown on soils poor in these elements, even though the difference in the chemical analysis may not be significant, indicates that these two elements must cause the formation of some other compound that is necessary for proper health. It has been shown that wool is of much better quality when produced on good soil, rabbits lose their reproductive power, and many other abnormal conditions in animals are caused or related to deficiencies in lime, phosphate, and in some cases other minor elements.

It has been shown also that the health of man is directly related to nutrition. The fertility of the soil from which he obtains his food will determine the quality of the food or type of nutrition. We also know that many abnormal conditions, both mental and physical, respond to the administration of certain vitamins and minerals. It is also generally recognized that the effectiveness of vitamins may be increased by the use of minerals. There is also evidence which indicates that the vitamins and mineral content of the food are related to the humus content of the soil.

This problem of nutrition is a vital one. It has a direct bearing on our own health, both mental and physical, as well as the children of present and future generations. When our forefathers landed on the shores of Virginia, they found a fertile soil. The food produced from this soil and the sea foods gave them an abundant supply of minerals, vitamins and other things which are needed for proper nutrition. They were bold, courageous, strong both mentally and physically. When the soils of the East were depleted of the basic fertility, "Go West Young Man" became the word of the day. At that time it was thought that the supply of virgin soil was unlimited and there was no need to conserve it. That was true at that time, but changes have taken place that make the conservation of our soils necessary to conserve our own existence. There are no more virgin soils. It has been estimated that there are about 600 million acres of tillable land in the United States. Of this, Bennett[7] estimates that 50,000,000 acres have been entirely ruined; another 50,000,000 acres are almost as serious; 100 million acres still in cultivation have been seriously impoverished, and about 100 million acres more of cultivated land are being depleted of productive soil at an alarming rate.

Morris L. Cook, engineer of the National Resource Board, in a statement before the Senate Committee in 1936, stated, "We have been trying to get water off the land into the big rivers and out of the way. We have got to hold it on the fields, or wherever it falls, and do it quickly, if disastrous floods, dust storms, and other calamities are to be stopped . . . .

"Our country is afflicted with earth disease. . . . as the matter now stands, and with continuance of the manner in which the soil is now being squandered, this country of ours has less than 100 years of virile national existence. If that represents a reasonably accurate statement, it is vastly more significant that we have probably less than 20 years in which to build up the technique, to recruit the fighting personnel, and most difficult of all, to change the attitude of millions of people who hold that ownership of land carries with it the right to mistreat and even destroy their land, regardless of the effect on the total national state."

There is a great need for an awakening on the part of all citizens as to the need for a much more rapid replacement of these life giving elements to our soil as a means of better living. There is a need for a close-working relation among soil scientists, agronomists, doctors, and chemists. The first step would be a research laboratory, composed of doc-

tors, chemists, agronomists and soil scientists with the main objective to find out the relation between the large increase in deficiency diseases of man and the soil on which the food is produced. The agronomist and soil scientists and the medical profession have made remarkable progress in their respective field; but their work must be correlated and both work to a much higher ideal, that of producing quality foods rather than quantity, and to prevent many of the deficiency diseases through proper diet instead of treating the deficiency after it occurs which is often too late to be effective.

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Emotional Stress Underlying Factor in Chronic Headaches.

The most effective treatment of chronic headaches includes both drug therapy and psychotherapy—the straightening out of the patient's emotional problems, according to three New York doctors writing in the November 2 issue of *The Journal of the American Medical Association.*

The doctors—Arnold P. Friedman, Charles Brenner and H. Houston Merritt—are from the Division of Neuropsychiatry, Montefiore Hospital and the Department of Neurology, College of Physicians and Surgeons, Columbia University.

The great majority of chronic headaches are caused by one of three conditions—migraine, injury or emotional stress. The pain, which is probably produced by a constriction of the blood vessels, is precipitated and made worse by emotional tension and inner conflict.

"It has been our experience," state the doctors, "that a combination of psychotherapy and drug therapy is much more effective than the latter alone in reducing the frequency, duration and severity of any of the three types of headache which we are discussing. Indeed in the majority of these patients medication is chiefly of value in relieving the discomfort of the acute attack, and it is only by reducing the amount of mental stress to which the patient is subjected that the headaches can be reduced in frequency and severity and often rendered easier to control by suitable medication when they do occur."

The authors point out that "the psychologic problems vary greatly from patient to patient. In some they may be largely the result of an unfavorable environmental situation which must be changed for improvement to result. In others the difficulty is primarily in the inner life of the patient, with the result that he cannot adjust adequately even to the usual demands of his daily life. Advice as to mental hygiene, reassurance and the opportunity to ventilate his anxieties and conflicts are psychotherapeutic aids which are within the province of the practitioner and which in favorable cases will result in good psychotherapeutic results. In other cases in which the patient's mental difficulties are more severe or more deeply repressed and hence less accessible to therapeutic influence, it seems best to refer the patient to a specialist."

TRENCH MOUTH (VINCENT'S INFECTION), SCURVY, AND VITAMIN C*

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I. HISTORY AND CLINICAL DISCUSSION

The first knowledge of the stomatitis now commonly known as "trench mouth" and the fusospirochetes comes from the early discovery of these organisms by Plaut in 1894, and by Vincent in 1896. In 1906 Schaudinn discovered the Treponema pallidum and renewed efforts were put forth to study and isolate the fusospirochetes. During the next ten years little was heard about Vincent's infection. Prior to World War I it was taught that it was one of the rarer diseases of the mouth. Shortly after the outbreak of World War I, epidemics of this disease appeared among the soldiers on the various battle fronts. Colonel Dunham, of the U. S. Army, recorded 6,189 cases himself. With return of the military forces to civilian life, many of these were seen in private practice.

The etiology of trench mouth up to the present has not definitely been determined. This study shows it to be due to a combination of factors. In every case of "trench mouth" are found a group of anaerobic spirochetes. fusiform bacilli, spirilla, and vibriones. The spirochetes are Borrelia vincentii, Treponema buccale, Treponema macrodentium, and Treponema mucosum. The latter two have been shown to be responsible for the putrid odor of Vincent's infection.

There are found two types of the fusiform bacillus—one a long, and the other, a shorter club-shaped rod. In addition to the symbiosis described by the term "fusospirochetal", there are found strep. hemolyticus, strep. viridans, and innumerable bacilli and other cocci.

The spirochetes and spirilla are especially difficult to distinguish by carbol fuchsin smears, and only darkfield examination and biochemical tests in various culture media will serve this purpose.

Nesson[1] states that Koch's postulates have never been fully satisfied. However, Smith[2] mentions Lichtenberg's work and describes how he produced spontaneous fusospirochetal infections in guinea pigs by traumatizing the gums with a sterile scalpel, and observed also the development of fusospirochetal infections in the mouths and throats of children in whom the trauma was incidental to tonsillectomy. Smith outlines the fulfillment of Koch's postulates as follows:

a. The fusospirochetes are constantly present in the lesion.
b. They have been isolated in pure culture.
c. When recombined after isolation and injected into animals, they produce the typical disease.
d. They have been isolated from the experimental lesions.
e. Up to the present the disease has not been produced by any other combinations of organisms.

For an excellent and comprehensive study of animal transmission and pathogenicity, the reader is referred to the work of Rosebury *et al.*[3] who show how harmless fusospirochetal saprophytes may produce the extensive, sloughing, gangrenous and necrotic lesions of mouth, skin, lungs and peritoneum when once they gain a portal of entry.

However, these same organisms are also present in the normal human mouth. I have made smears of 500 normal subjects' gum scrapings and find large numbers of fusospirochetes in all cases. Nesson[1] reports 400 such cases who were clinically free but showed the microscopic picture of trench mouth. The fact that these organisms are normally present in the mouth cannot be used as a valid argument against their pathogenicity, since there are many examples of pathogenic organisms that live as saprophytes in the mouth and nasopharynx.

The leading investigators agree that the streptococci activate the initial lesion and pave the way for the fusospirochetes. When the gangrenous nature of fusospirochetal disease in the mouth and other parts of the body is considered, it is difficult to view the fusospirochetes in any other light than as pathogens. With an environment favorable to their anaerobic growth and a host with "lowered resistance" we have a most favorable background for the development of a case of trench mouth. What this lowered resistance amounts to certainly involves a number of factors. The disease develops in unclean pyorrheic mouths. The pockets have been formed, the calculus and detritus are present and the tone and resistance of the tissues have been reduced. In addition to this local condition, there is usually a lowering of systemic resistance, together with a faulty diet to complete the picture.

*Read before Roanoke Dental Academy, May 3, 1946, and Roanoke Academy of Medicine, May 6, 1946.

Smith[4] states that guinea pigs living on a well balanced diet have a few fusiform bacilli, vibriones, spirochetes, and cocci in the gingival crevices. Yet, these animals never develop even a mild gingivitis. If the gums of these healthy guinea pigs are inoculated with pus from severe cases of pyorrhea in man, an acute infection is produced, with swelling and even local necrosis. However, the infection is always promptly eradicated and never becomes chronic. If the guinea pigs are fed a diet that will produce chronic scurvy after two to three weeks, the gums become reddened and swollen and the attachment of the gums to the teeth is loosened. The previously harmless fusospirochetes slip into these crevices and find ideal cultural conditions in this anaerobic environment. The clinical picture of pyorrhea develops as Wolbach and Howe[5] have shown. The pus from these gums shows the same symbiosis as in man. When the diet is supplemented by vitamin C in the form of orange or tomato juice, or pure cevitamic acid, there is a reversal of the process, with complete regeneration of the gums.

Keeton[6] has shown that vitamin C is an oxidizing catalyst and a regulator of intercellular cement substance or collagen. Due to a lack of cevitamic acid, anaerobic conditions result and portals of entry following the breakdown of intercellular cement substance develop.

Nesson[1] states that trench mouth is contractible, i.e., it may be gotten from someone already infected. However, this is not necessary as the host may infect himself by failure to observe the primary laws of oral hygiene and proper diet. One attack does not produce an immunity to subsequent attacks. Rosebury[7] has shown that there is only circumstantial evidence that Vincent's infection is a communicable disease and states that its development depends on diet and other factors allowing a portal of entry.

Trench mouth may be found in scurvy, cancer, syphilis, alcoholism, diabetes, metallic poisoning, fatigue, dissipation, colds, blood dyscrasias, faddism in diet, smoking, excessive use of carbonated drinks and chewing gum, from malocclusion or poor dental prosthetics, and in the course of treatment of peptic ulcer on the Sippy regime unless supplements of vitamin C are added as shown by Parks.[8]

It is very communicable if the resistance is low, and may be contracted through kissing, using common towels and drinking cups, soda fountain dishes, lip-sticks and pencils. The most susceptible age is 18 to 30 years.

The local and systemic symptoms and signs of acute trench mouth and scurvy are almost identical, and may be summarized as follows:

A. *Local:*

1. Gingival tissues are red, swollen and painful
2. Grayish white slough on surface of gums
3. Gums tender to the touch
4. Gum surfaces appear raw and bleed easily
5. Sloughing may spread to the cheeks and soft palate
6. Almost always a punched-out appearance of the inter-proximal gingival margins or an edematous hypertrophic congestion of the gingiva
7. There is a metallic taste in the mouth with a marked increase of viscid salivation
8. There is a putrid odor from the mouth
9. The pharynx is injected, and there may be difficulty in swallowing
10. Lesions may be present on the lips or corners of the mouth of an herpetic nature suggestive of syphilis
11. The teeth all ache and may seem loose or have a wooden feeling
12. The submaxillary glands are often tender and swollen.

The spirochetes are most abundant in the zone between necrotic and living tissue, and favor the deeper tissues. Bleeding is due to destruction of the normal squamous epithelium, exposing the minute capillaries and blood vessels and leaving a raw bleeding surface.

B. *Systemic:*

1. Sudden onset
2. Malaise and lassitude
3. General weakening of the body with loss of appetite
4. Gastro-intestinal disturbances: indigestion, vomiting, diarrhea
5. Slightly elevated temperature accompanied by a feverish feeling and acceleration of the pulse
6. Headache, restlessness, insomnia, fatigue.

The treatment of these local and systemic manifestations as set forth by Nesson[1] and Fantus[9] is as follows:

A. *Local:*

1. Churchill's iodine followed by 10 per cent silver nitrate.
2. Metaphen and the aniline dyes.
3. Chromic acid 8-10 per cent followed by hydrogen peroxide which produces the active trioxide of chromium. In addition, the patient is to use a sodium perborate mouth wash of 1 tsp. to the glass of warm water several times a day. Hydrogen peroxide 1:1 in warm water may be used. When acute stages are over, Nesson uses 1 per cent acriviolet or Tr. Metaphen. The sodium perborate is used for a month and then discontinued, as it is unsuitable for daily use.
4. Neoarsphenamine in 10 per cent glycerine locally.

Lately the use of sulfadiazine powder massaged into the gums and penicillin applied topically (Schuessler *et al*[10]) have been shown to be of definite value.

B. *Systemic:*

1. Catharsis if necessary
2. Two full glasses of orange juice daily; a quart of milk daily, and plenty of raw fruits and vegetables
3. No tobacco, alcohol, or spicy foods
4. Neoarsphenamine 0.3 gm. intravenously at intervals of several days in recalcitrant types
5. Fuadin 5 cc. every three to five days intramuscularly.

Naegeli *et al*[11] have found that penicillin by parenteral route, 20,000 to 30,000 units every 3 hrs., is of striking value.

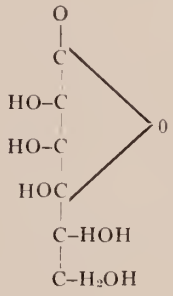
No case can be considered cured until all the predisposing causes have been eliminated. Oral conditions, dental conditions, diet, focal infections, systemic diseases, etc., must be treated as part of a general condition.

Lyons[12] describes cases of subclinical scurvy due to avitaminosis.

C. The gums are exactly as described under trench mouth. There is a gingivitis of some months' standing with gums puffy to the point of losing their stippling. They are slightly glazed or dry and rolled in the interproximal spaces and along the gum margins with a color change to a deep red. There is only a small amount of tartar formation or none at all, indicating that the local irritation is not a factor in the gingivitis.

II. The Chemistry of Vitamin C and Technique for Quantitative Determination

A most illuminating discussion of the identification, isolation, and synthesis of vitamin C is given by Zilva.[13] A few years ago vitamin C seemed to be the most unstable and elusive of the vitamins. In 1928 Szent-Gyorgyi isolated hexuronic acid ($C_6 H_8 O_6$) from cabbage, orange juice, and adrenal cortex. In 1932 King and Waugh announced that they had isolated crystalline vitamin C. This was followed a few months later by Haworth's description of the chemical structure of this vitamin. Its synthesis in the laboratory by Ault, Reichstein, and others was announced the following year. It was noted at once that crystalline vitamin C, first called ascorbic acid but later renamed cevitamic acid, seemed to be identical with hexuronic acid first discovered by Szent-Gyorgyi. This fact was established by Svirbely and Szent-Gyorgyi shortly after King and Waugh's announcement. Cevitamic acid is an odorless, white crystalline powder, freely soluble in water, oxidizes on exposure to air and light, and is a strong reducing agent, reducing Fehling's solution without heating. It is found in citrous fruits, adrenal cortex, adrenal medulla, paprika, green pepper, gladiolus, iris, parsley, water cress, and innumerable other sources. Its chemical formula is accepted to be:



A method for chemical determination of vitamin C which is comparable to the biological assay method on guinea pigs was described by Tillmans *et al.*[14] using 2:6 dichlorphenolindophenol. This is a blue dye and is very accurate in determination when titrated against vitamin C. The reaction given in Hawk and Bergheim's text[15] is as follows:

$$\underset{\text{cevitamic acid}}{C_6H_8O_6} + \underset{\substack{\text{2:6dichlorphenol-}\\\text{indophenol}\\\text{blue}}}{O{:}C_6H_2Cl_2{:}N.C_6H_4OH} = \underset{\text{dehydro-cevitamic acid}}{C_6H_6O_6} + \underset{\substack{\text{2:6dichlorphenolindophenol}\\\text{leucobase-colorless}}}{HO.C_6H_2Cl_2.NH.C_6H_4OH}$$

Van Eekelen,[16] Emmerie and Van Eekelen,[17] and Birch *et al.*[18] have made valuable contributions in perfecting the method of determination of vitamin C in urine, blood, and various animal and plant tissues. Hess and Benjamin[19] found that urine and blood contains only traces of glutathione and sulphydryl groups, and, therefore, any reducing substance titrated against the indicator is considered to be cevitamic acid.

For most accurate results on urine, a 24-hour sample should be taken in about one-tenth volume of glacial acetic acid. If the specimen should become alkaline, the glutathione in the urine would react with the indicator and results would be unreliable. Cysteine and various phenolic compounds will reduce the indicator in acid solution and therefore must be removed, as suggested by Emmerie. A 20 per cent mercuric acetate solution should be made up in water, allowed to stand 24 hours and filtered before use. It should never be used longer than three weeks. 100 cc. of urine from the 24-hour specimen in glacial acetic acid is taken and neutralized with calcium carbonate until alkaline to Congo red paper. Then 20 per cent mercuric acetate is added drop by drop until a creamy white precipitate is complete. Too much mercuric acetate should be avoided. If one is uncertain as to whether all the glutathione has been removed, a sample should be tested with potassium nitroprusside in the presence of ammonia. If present, a purplish color will develop. The precipitate is allowed to settle, and the supernatant fluid is decanted off and filtered. A 20 cc. portion of the filtrate is measured into a beaker and acidified with 2 cc. of glacial acetic acid. This is titrated with a standardized solution of indophenol from a burette. It is necessary to use a composite 24-hour specimen because the vitamin excretion varies throughout the day, rising rapidly after a meal, showing up within one hour, reaching a peak in three hours, and gradually returning to normal.

In titrating, the end point is rather difficult to reach by adding the indophenol to the vitamin-containing fluid. The color of the indicator is discharged until all the cevitamic acid is dissipated, which is indicated by the reappearance of the color. As the titration is carried out in an acetic or trichloroacetic acid medium, it should be noted that in such acid medium the non-reduced indicator shows a pink color while in neutral solution the color is blue.

As stated above, the titration to a pink color in yellow tinted untreated urine is difficult. For this reason, Ahmad[20] suggests adding the vitamin-containing fluid to the indicator, which gives a very much better end point. I have found that the specimens should be kept on ice for most accurate results.

The foregoing methods have been found much more practical and rapid and just as accurate as the more prolonged and laborious biological assay of vitamin C containing fluids as applied to guinea pigs as shown by Bessey and King[21] and Guerrant *et al.*[22] Guerrant's table on the cevitamic acid content of various juices is very interesting.

Juice	Vitamin C in mg. per cc.	Juice	Vitamin C in mg. per cc.
Lemon fresh	.455	Peach fresh	.018
Orange fresh	.500	Plum fresh	.030
Orange canned	.294	Rhubarb fresh	.278
Tangerine fresh	.208	Sauerkraut canned	.082
Lime fresh	.459	Cabbage fresh	.427
Grapefruit fresh	.266	Peppers fresh	.203
Grapefruit canned	.150	Carrots fresh	.040
Pineapple fresh	.310	Celery fresh	.009
Pineapple canned	.070	Turnip fresh	.191
Tomato fresh	.157	Cucumber fresh	.012
Tomato canned	.242	Potato fresh	.021

Besides the chemical and biological assays capillary fragility tests have been described as a rough method of estimating vitamin C deficiency. Wright and Lillienfeld[23] have outlined a method as follows: Make a circle 2.5 cm. in diameter at a distance 4 cm. from the crease of the elbow. A blood pressure cuff is applied and the pressure kept for 15 minutes halfway between systole and diastole. The number of petechiae is counted.

Normal	10 or less
Borderline	10 to 20
Abnormal	20 or more

Van Eekelen[24] states that in general, there is a linear correlation between the urinary excretion level and the blood ascorbic acid. With the development

of a vitamin C deficiency the amounts of cevitamic acid in blood and urine decrease. This agrees with the findings of Taylor *et al.*[25] and Abt *et al.*[26] It is possible to get an insight into the state of vitamin C saturation of a given subject by blood and urine determination. These authors found average normal values of 1.61 mg./100 cc. of blood with a renal threshold excretion level at 1.4 mg./100 cc. In scurvy the blood vitamin may reach such low levels as 0.245 mg. Even with a high vitamin intake in severe infections the blood vitamin C rarely gets to be over 0.15 to 0.25 mg.

Finkle[27] and Harris[28] have found the normal 24-hour output of cevitamic acid to be 13-33 mg. In scurvy or in trench mouth the urinary vitamin may drop to almost zero in the case of scurvy, and to such low values as 3.56 mg. per 24 hours as shown by Lyons.[12]

Johnson and Zilva[29] have shown that the urinary excretion of cevitamic acid under normal conditions of existence is variable and that this output is due to two factors: (a) the remote intake and storage in the body, and (2) the immediate vitamin intake. When the store of cevitamic acid is complete, a more or less constant level of urinary excretion can be achieved, and this level varies with the magnitude of the daily quantity ingested. The percentage of ingested cevitamic acid in the urine is lower when high doses are taken than when the doses are low. The actual amount of cevitamic acid in the urine not accounted for is very much higher in the first case than in the second, and is evidently not indicative of the real vitamin requirements of the individual. No dehydroascorbic acid is found in the urine when the doses are high; therefore, this cannot account for the discrepancy. The only other assumption which is tenable is that the excess cevitamic acid is stored in the body. On discontinuing the intake of cevitamic acid, a subject who is "saturated" may yet remain in this condition for some time despite the fact that his urinary excretion drops to a very low level. When a subject is "saturated", or approaching "saturation", and a dose of cevitamic acid is taken, the rate of urinary excretion rapidly rises to a maximum in about 4 hours, and then gradually returns to the initial rate in about 24 hours. Diuresis induced by excessive intake of water does not influence either the rate or level of urinary output of the cevitamic acid. The rate of urinary excretion of cevitamic acid is low during the night and increases soon after rising. When dehydroascorbic acid is ingested it appears in the urine as ascorbic acid (cevitamic acid). It is possible to exist on diets containing sufficient vitamin C to insure good health and freedom from scurvy or trench mouth even when the store of the vitamin in the body is low.

Abbasy *et al.*,[30] Harris and Ray[31] and Finkle[27] have devised diagnostic tests based on the principle that in individuals whose bodies have stored a reserve supply of vitamin C, the administration of a large test dose will lead to a sudden increased excretion, far above normal; whereas, in cases of deficiency, the vitamin is retained and an increase in excretion is noted only after several test doses. The diagnostic test may be carried out by the use of fruit juices high in vitamin C, or by use of 600 mg. of cevitamic acid orally for adults and 100 mg. orally for infants. 100 mg. intravenously may be used in adults. A 24-hour specimen taken in one-tenth volume of glacial acetic acid may be used. However, immediate titrations are more accurate. In this way latent scurvy may be determined. The test is applicable to certain cases of trench mouth also.

Cevitamic acid can be used in pure form by some patients who are hypersensitive to tomato juice or citrous fruit juices.

It is interesting to note that as large doses as 1,000-2,000 mg. of cevitamic acid may be injected intravenously without untoward effects. The vitamin may be injected subcutaneously in 20-30 mg. quantities by dissolving this amount in sterile water and neutralizing with one-half its quantity of sodium bicarbonate to pH 7.0.

One mg. of cevitamic acid is equal to 20 international units. The reputed minimal daily requirement of the vitamin is given as 1,000 international units or 50 mg. This is obtained by ingesting 100 cc. of fresh orange juice as will be readily seen by reference to the table by Guerrant in a previous portion of this paper.

Wood[32] states that there is no evidence that human beings can synthesize cevitamic acid in their bodies. In this respect the guinea pig is identical and makes an ideal experimental animal for biological assay and other tests. The rat is able to synthesize the vitamin, and, is therefore not suitable for experimental studies.

For many years there has been more than just a

casual intimation that pyorrhea and unhygienic oral conditions are often associated with peptic ulcer. Smith[33] in an excellent paper points out that peptic ulcer in the guinea pig, at least, is apparently caused by a prolonged partial deficiency of vitamin C. It requires not too great a stretch of the imagination to conservatively hypothecate that the oral condition and the ulcer may have a fundamentally identical etiological setup as part of a larger clinical and pathological picture than either alone.

III. Clinical and Laboratory Data

I have used the 2:6 dichlorphenolindophenal indicator as marketed by the Hoffman-LaRoche Drug Company. One tablet dissolved in a 50 cc. volumetric flask gives a solution, one cc. of which is equivalent to 0.02 mg. cevitamic acid. To test the accuracy of the method, I tested a 25 mg. tablet of pure cevitamic acid and on two titrations recorded values of 24.8 mg. and 25.2 mg., respectively. The average is 25.0 mg., which indicates that the method is surprisingly accurate.

Using 24-hour specimens of urine collected in one-tenth volume of glacial acetic acid, and titrating a 10 cc. sample of the specimen against the indicator solution described above, I have obtained some data which may be of interest.

Although these cases are few in number, it can readily be seen that the vitamin C output in the group of normal subjects showed higher excretion levels than those with bleeding gums. It is also evident that ingestion of vitamin C served to increase the urinary output of vitamin C and in these cases was instrumental in improving the condition of the gums, since no other treatment was used.

IV. Summary

1. The fusospirochetes are present in normal mouths as well as in trench mouth, so that a positive gingival smear alone is not sufficient evidence for making a diagnosis of trench mouth.

2. If the vitamin C excretion in a 24-hour urine specimen is less than 13 mg., then a positive gingival smear is of utmost diagnostic significance.

3. Due to deficient vitamin C an anaerobic state is created in the tissues and at the same time intercellular cement substance breaks down, allowing a portal of entry of otherwise harmless saprophytes into an ideal medium where they become pathogenic.

4. A technique for rapid determination of vitamin C levels in body fluids is presented.

5. Cases of trench mouth on low vitamin C diets are shown to improve with no other treatment than large doses of vitamin C.

Table No. I
A Group of Normal Subjects

	Daily Diet Vit. C	*Smears*	*Gums*	*Vit. C Urinary mg. per 24 hrs.*
1. J.F.	2 oranges	few spirochetes few fusiform bacilli	firm no bleeding	13.2 mg.
2. E.S.	½ grapefruit or 1 orange	few spirochetes many fusiform bacilli	firm no bleeding	16.2 mg.
3. R.S.	1 limeade ½ grapefruit	no spirochetes occ. fusiform bacillus	firm no bleeding	17.0 mg.
4. N.W.	1 orange or 1 glass tomato juice	occ. spirochete rare fusiform bacillus	firm no bleeding	18.0 mg.
5. O.H.	1 orange	occ. fusiform bacillus occ. spirochete	firm no bleeding	19.8 mg.
6. R.J.	1 orange or glass tomato juice	few fusiform bacilli few spirochetes	firm no bleeding	20.4 mg.
7. I.B.	½ grapefruit and 1 glass tomato juice daily	occ. fusiform bacillus no spirochetes	firm no bleeding	56.3 mg.
8. D.H.	½ grapefruit 1 glass tomato juice	many fusiform bacilli many spirochetes	firm no bleeding tendency to recede	66.8 mg.

TABLE NO. II

A Group of Subjects With Trench Mouth

	Daily Diet Vit. C	*Smears*	*Gums*	*Vit. C Urinary mg. per 24 hrs.*
W.S.	very occ. orange	few fusiform bacilli	red and swollen bleed easily	11.3 mg.
W.S.	150 mg. cevitamic acid daily for 10 days	same	no swelling no bleeding normal color	18.2 mg.
C.W.	very occ. orange or grapefruit	few fusiform bacilli few spirochetes	bleed easily spongy and red	12.35 mg.
C.W.	200 mg. cevitamic acid daily for 10 days	same	normal firm no bleeding	26.4 mg.
L.F.	no citrous fruits	many fusiform bacilli few spirochetes	spongy rolled in interproximal margins bleed easily	13.2 mg.
L.F.	3 weeks 2 oranges daily for	same	no bleeding firm	33.0 mg.
R.O.	occ. orange	many fusiform bacilli occ. spirochete	tender receding bleed easily	10.3 mg.
R.O.	3 oranges daily for 10 days	same	firm no bleeding	65.7 mg.

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INTERPRETATION OF QUALITATIVE AND QUANTITATIVE SEROLOGIC REPORTS

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and
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The laboratory of the Virginia Health Department employs the Kolmer Complement Fixation test and three flocculation test procedures (Mazzini, Eagle and Kahn) in the serodiagnosis of syphilis. The function of the above tests, performed qualitatively, is to aid the physician in establishing a diagnosis. The same procedures may also be employed quantitatively with syphilitic serum from treated cases in determining increase or decrease in reagin. The various flocculation tests have no fundamental differences. Variances of the tests are due to the adjustment of the antigens which control the sensitivity and specificity of the reaction. Syphilitic reagin, a substance which is present in the blood as a result of syphilitic infection, is presumably responsible for a positive serologic reaction. The presence or absence of this reagin is determined by one or more qualitative serodiagnostic tests.

Qualitative tests are conducted with a single amount of blood serum or spinal fluid. A 4+ or strongly positive reaction is considered diagnostic. If a plus-minus, one plus, two plus, or doubtful reaction (depending on the terminology of the author serologist whose test is being performed) is obtained, the result should be regarded as weakly positive provided the clinical history of the patient excludes infection of malaria, yaws, infectious mononucleosis, vaccinia, etc. The futility of this entire scheme of classifying results has been much discussed and can be illustrated by the following simple experiment, illustrated in "The Laboratory Diagnosis of Syphilis" by Dr. Harry Eagle, Johns Hopkins University School of Medicine. "If a serum of a patient with secondary syphilis is serially diluted twofold in each of a series of tubes (1, 1:2, 1:4, 1:8, 1:16, 1:32, etc.) and each dilution tested by a sensitive Wassermann or flocculation technic, it is found that the serum continues to give a 'completely' or 'strongly' positive reaction up to a 1:32, 1:128 or even 1:500 dilution. Obviously, the original serum contained thirty, one hundred or even five hundred times the amount of reagin necessary to give a 'completely' positive result. The term 4+, far from implying a 'strong' positive reaction, thus applies to any serum containing enough reagin to prevent hemolysis entirely, or cause definite aggregation, whether that serum contains one or one hundred times this minimal reactive quantity. The terms 1+, 2+, 3+, upon which so much stress has been laid as a measure of the degree of positivity, actually cover less than one-hundredth of the total observed variation and apply only to sera which contain barely detectable quantities of reagin."

A weak reaction reported from the State Health Department Laboratory on a "doubtful" form could be due to a limited quantity of reagin in the blood in early syphilis, or to a reduction in titer that might occur as a result of treatment. In this respect the term "doubtful" is erroneous, but since actual readings are not given the clinician he should not regard the report lightly. A positive qualitative test is no indication of the degree to which it is positive. The report form using the term, negative, positive and doubtful are interpreted as follows: If the result is clearly *negative* (complete hemolysis in the Wassermann; no aggregation in the flocculation test) or clearly *positive* (no hemolysis; definite and unmistakable aggregation), the specimen is reported as simply *negative* or *positive*. Specimens reported as doubtful include Wassermann tests showing incomplete hemolysis and flocculation tests yielding irregular aggregation. All specimens reported as doubtful should be repeated. On new cases repeated doubtful serologic reports should cause the physician to take a careful history, and in the absence of a history and signs of syphilis and with a negative spinal fluid the physician should carefully evaluate the case before placing the individual under treatment.

In treated cases, the physician should use quantitative serologic tests in evaluating his case. Quantitative tests are conducted to determine the amount of reagin present or the reagin titer. The titer of the serum is determined by making serial dilutions

of serum with saline or diminishing quantities of undiluted serum. A given serum may have just enough reagin to react to a positive degree (4+) undiluted only, or its reagin content may be sufficient to yield a positive reaction in a dilution containing one part of serum and 255 parts of saline, producing a titer of 1:256. It is obvious that quantitative procedures are the only means of detecting degrees of serologic improvement in relation to treatment and serve as an index to the efficacy of the prescribed therapy.

The quantitative serum test is not an aid to diagnosis. We quote from "The Laboratory Diagnosis of Syphilis"—first edition—by Eagle (page 321)—"The routine qualitative test with the maximum safe quantity of serum is just as sensitive; and the quantitative reaction, beginning with that quantity, merely determines the maximum dilution in which the result is still positive. A patient whose serum is positive up to a 1:10 dilution (reagin titer of 10) is no less syphilitic than the patient whose serum is positive up to a 1:800 dilution. Although certain clinical conditions are *generally* associated with a high titer and others with a *generally* low titer (Schwartz), the individual variations are so pronounced as to make the actual titer of no diagnostic significance in the particular case. It is not yet known whether the reagin titer has any prognostic significance; such meager information as is available suggests that it does not. The chief value of the quantitative serum test, whether Wassermann or flocculation, lies in the fact that it enables the physician to evaluate the serologic response from the very beginning of treatment, a factor to which the routine test offers no clue. The character and extent of the quantitative serologic response may ultimately prove to be of prognostic importance (Vedder, 1929)."

"In the spinal fluid, however, the quantitative test with graded quantities of fluid has proved of such definite diagnostic and prognostic significance that it has been regularly adopted as a routine procedure. Remembering that there are always exceptions, it is in general true that the intensity of the cellular protein, and Wassermann reactions in the spinal fluid parallel the degree of central nervous system involvement; and the study of Moore and Hopkins indicates clearly that even in asymptomatic neurosyphilis, the ultimate prognosis of the patient varies directly with the cell, protein, and reagin content of the spinal fluid. In addition, the fall in reagin titer is a valuable and sometimes the only clue to the success of the therapeutic regime."

The importance of the quantitive serodiagnostic test cannot be over-emphasized at this time. It is an essential procedure in the post-treatment evaluations of the penicillin treated individual. Penicillin treated syphilis should be followed up with a quantitative serologic test at monthly intervals for the first post-treatment year; at three-month intervals for the second year, and every six months for the third, fourth and fifth years. Rise in titer may not only indicate serologic relapse, but clinical relapse to infectiousness. Thus, all individuals whose sera evidences a sharp rise in titer should be carefully examined for mucocutaneous relapse lesions.

The Laboratory of the State Department of Health offers quantitative serodiagnostic tests upon request.

THE FORUM

Out-Patient and Hospital Care for Veterans.

The following information concerning out-patient and hospitalization benefits of the Veterans Administration is disseminated in the interest of clarifying for veterans, civilian physicians, and other persons concerned the procedures relative to these benefits.

Among the many functions of the Veterans Administration in administering the benefits provided by law to veterans and their dependents is out-patient medical care and hospitalization.

In general, the Veterans Administration furnishes complete medical care and treatment, either on an out-patient basis or by hospitalization, to all veterans with service-connected disabilities or disabilities aggravated by service. Veterans with nonservice-connected ailments are not entitled to out-patient treatment but may receive hospitalization if unable to pay for medical care elsewhere and if there is a vacancy in a VA hospital not required for a service-connected case. The statement of the veteran of his inability to pay is accepted by the Veterans Administration.

In order to be eligible for out-patient treatment at VA hospitals and clinics or to receive civilian medical treatment at VA expense, the veteran must meet the following conditions:

1. Veteran must have had active service in the armed forces of the United States or its allies and must have received a discharge under conditions other than dishonorable.

2. Veteran must have a disability or disease which is known to have been incurred in or aggravated by service in the armed forces of the United States.

Prior authorization of the Veterans Administration for any type of medical treatment by civilian doctors is generally required, and this authorization can be obtained by contacting the Veterans Administration Regional office in Roanoke.

Should the case in question be emergent and prompt treatment is required, the physician may render such treatment and thereupon complete a request form for authority for treatment and send it to the VA Regional office, and in no case later than 15 days after treatment is begun. Authority for this medical treatment will be forwarded to the physician from the Veterans Administration just as soon as eligibility has been established and this will constitute the physician's authority to give treatment and receive payments under the VA's regulated scale for the medical treatment rendered. If it develops that the emergency arose from a nonservice-connected disability then the Veterans Administration will not be responsible for treatments given after it is determined that the veteran is suffering from a nonservice-connected disability.

In addition to out-patient treatment provided service-connected cases at VA hospitals and clinics, physicians have been designated by the VA to provide this treatment in communities throughout the State which are distant from VA out-patient treatment facilities.

In the case of hospitalization of a veteran, the basic requirements are the same as those shown above. However, in emergent cases, hospitalization may be effected in civilian hospitals for service-connected disabilities subject to the following conditions:

1. Prior authority of the VA to hospitalization is generally required. If a veteran is eligible, this may be obtained by collect telephone call, telegram or letter to the Chief Medical Officer of the VA Regional office in Roanoke.

2. When the case is highly emergent, and it is impracticable to obtain prior approval, the veteran may be hospitalized and the Chief Medical officer of the VA Regional office subsequently notified. This notification must reach the Veterans Administration Regional office within 72 hours from the time of such hospitalization, and strict compliance with this requirement is necessary for payment of an account.

In order that veterans may be hospitalized in civilian hospitals, it is required that the hospital furnish the following information concerning the hospitalized veteran:

Full name, enlistment and discharge dates, present address, name and address of hospital, date of admission to hospital, nature of condition requiring treatment, if ambulance is necessary give name of ambulance company and estimated cost, if attendant is necessary give name and relationship to the patient.

If emergent and service-connected and it is desired to hospitalize the veteran in a civilian hos-

pital, the Chief Medical Officer of the VA Regional office in Roanoke should be contacted. Non-emergent and elective surgical and medical procedures will not be authorized prior to the establishment of service-connection.

A few general rules to follow for medical treatment and hospitalization for the veteran at the expense of the VA are as follows:

1. Veteran may be cared for at VA hospital outpatient departments for service-connected disabilities.

2. Veteran may be cared for by civilian physician for service-connected disabilities.

3. Veteran may be hospitalized in VA hospitals for both service-connected and nonservice-connected disabilities, the latter only if facilities are available and the veteran is unable to pay for medical care elsewhere.

4. Veteran may be hospitalized in civilian hospitals for emergent treatment of service-connected disabilities when the case is highly emergent and there are no VA facilities feasibly available, transportation to a VA hospital would be hazardous, and it is impracticable to obtain prior approval.

5. Female veterans may be hospitalized in civilian hospitals in emergencies on authorization by the VA for nonservice-connected disabilities but not for pregnancy.

Full information and assistance concerning outpatient treatment and hospitalization are available at the nearest VA office or through the Chief Medical Officer at the Roanoke Regional office.

Dr. Renn Resigns from De Paul Hospital Staff.

Dr. George A. Renn recently tendered his resignation from the Clinical Staff of De Paul Hospital, Norfolk. His reason for resigning was that he felt that he had approached the "Twilight of Life" and from now on he wished to take everything a little easier.

We know that as the twilight of day approaches, and the cool of the evening re-invigorates us after the toil of a hard day's work, there is real pleasure relaxing in quiet solitude or enjoying the comradeship of relatives and loyal friends. To spend many such happy hours, I am sure is the thought which has caused our friend to wish to be relieved of the arduous duties he has performed for nearly fifty years.

The Staff of De Paul Hospital accepted his resignation with regret, but with a knowledge and appreciation of his long and faithful service with the old St. Vincent's and recently with De Paul Hospital. After accepting his resignation from the active Staff, he was unanimously elected to the Honorary Staff.

With the election of Dr. Renn to the Honorary Staff, we know that it is a very small gesture of our appreciation for the service he has rendered to those who have been able to remunerate him financially as well as the poor.

Words and money are not adequate remuneration, but as he said to me "the pleasure and satisfaction I have obtained from my life's work is reward enough."

Your Chairman of this Committee has had the pleasure of visiting Medical Clinics with Dr. Renn. His enthusiasm at the nice age of eighty-one is an inspiration to the younger men of our profession. This Committee knows that it voices the sentiment of the entire Staff in expressing our love and admiration for our esteemed friend and colleague for his forty-five years of service.

Our sincere and earnest wish for Dr. Renn is that he will be with us many, many years, and his presence will always be an inspiration in the future as it has in the past.

A. A. BURKE, *Chairman*,
M. S. ANDREWS,
J. WARREN WHITE.

Charley Horse Not a Muscle Cramp.

A Charley horse, the bane of baseball players and other athletes, is not a muscle cramp, but an injury to a muscle, according to the November 30 issue of *The Journal of the American Medical Association.*

A Charley horse or muscle injury and a cramp are of entirely different pathologic origins, the article says, adding that massaging is not advisable for a Charley horse, but is advisable for a cramp.

In discussing treatment, the article gives this advice: "In the acute stage at the onset of a Charley horse the leg should be packed in ice about the injured area and held quiet for half an hour to an hour. In the acute stage subsequently for about six weeks (a) the leg should be placed at rest in a cast or splint and kept quiet for 10 days, the patient continuing to wear the cast for six weeks; (b) diathermy, long wave treatments, should be given daily; (c) heat or contrast baths should be given; gentle motion should be given every few days to prevent stiffness."

PRENATAL CLINIC SERVICE

COMMITTEE ON MATERNAL HEALTH,
MEDICAL SOCIETY OF VIRGINIA

Beginning with six existing established prenatal clinics in 1936 an effort was made to establish similar facilities for indigent maternity patients throughout the State.

The approval for such a project was first obtained from the Medical Society of Virginia. The approval of the local medical society has been secured preliminary to inauguration of this service in any local area. Local physicians serve as part-time clinicians. Quarters, equipment and nursing personnel are made available through health departments. Quality of work is emphasized rather than quantity of patients.

The physicians participating in this activity have manifested a continuing interest which was maintained during the stress of the war years. The medical service to indigent clinic patients has been of benefit to them but a greater value may have resulted through the educational features accompanying these activities. Each clinic continues to be a practical demonstration to the community of the need for and advantages of medical supervision. Some physicians find that the clinics serve a useful purpose in rendering prenatal care to part-pay or semi-indigent patients referred by them for this service. Midwives are encouraged to attend clinics with their patients in order that cases with potential pathology may be "screened out" and medical care arranged.

If complications arise hospitalization may be secured upon referral by the attending physician. Comment relative to the Maternal and Child Health Hospitalization Plan is made in an editorial in this issue of the JOURNAL.

There has been a consistent reduction in the maternal mortality rate in Virginia during the past ten years. The prenatal clinic service is accepted as one of the many factors contributing to this decrease. During the past year there were 66,362 births recorded in Virginia; 7,207 or 10.8 per cent of these patients were given prenatal care in the 96 clinics. The committee recognizes the advantages of the prenatal clinic service for all geographic areas of the State and hopes that facilities may be established in those localities not now included.

Better Medical Training Responsible for Drop in War Mortality Rate.

The mortality rate from wounds among the combatant forces of the United States Army in World War II was less than 3 per cent, or well under one-half of that in World War I, variously estimated from 7 to 10 per cent.

"These truly remarkable results," says an editorial in *The Journal of the American Medical Association*, "are usually attributed to recent scientific advances, such as the antibiotics ("miracle drugs"), blood banks, blood transfusions and blood substitutes—plasma or serum albumin—and the use of new narcotics and anesthetics.

The credit should actually be given to factors which made these discoveries and their application possible, namely, the gradual growth of medical knowledge and expertness; largely unnoticed and unheralded.

"What is little appreciated is that the medical progress accomplished by American medicine in the interim between the two world wars is to a great extent due to standardization of medical schools by the American Medical Association and the standardization of hospitals by the American Medical Association and the American College of Surgeons, resulting in the highest type of training for medical students and interns."

The editorial points out that there were relatively few men of pre-eminent ability in surgery and its specialties in the former war, whereas there were at the beginning of this war literally thousands of well trained, capable surgeons in this country, many of whom were already members of the reserve corps of the Army and Navy.

PUBLIC HEALTH

L. J. ROPER, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for November 1946, as compared with the same month in 1945, and for the period of January through November, 1946, compared with the same period in 1945, follows:

	Nov. 1946	Nov. 1945	Jan.-Nov. 1946	Jan.-Nov. 1945
Typhoid and Paratyphoid	13	10	116	162
Diarrhea and Dysentery	109	178	2,560	6,990
Measles	270	107	13,216	1,387
Scarlet Fever	169	498	2,531	3,790
Diphtheria	84	126	501	479
Poliomyelitis	29	8	131	329
Meningitis	4	3	192	205
Undulant Fever	8	0	61	30
Rocky Mountain Spotted Fever	1	5	92	98
Tularemia	5	1	57	41

REPORTING COMMUNICABLE DISEASES

The policy of the state and local health departments has always been one of full cooperation with the medical profession. The doctors of Virginia in turn have rendered a high level of support to the public health program. This service has been of value to the end that much of the progress made would have been otherwise impossible. It is, therefore, with considerable reluctance that the attention of the profession is directed to the partial or complete failure of many physicians to report communicable diseases. This department is fully appreciative of the heavy load that the physician is called upon to bear, and of the excellent medical care provided under great pressure. However, in our experience, the busy doctor is frequently the most prompt and conscientious in his reporting.

The local and state health departments offer the following services to aid the physician in control of communicable diseases:

1. Consultation service
2. Laboratory examination for diagnosis and control
3. Epidemilogical investigation
4. Public health nursing service
5. Sanitation investigation
6. Statistical information
7. Public health education
8. Distribution of biological materials on request.

In return the health department expects, and has the authority to require prompt and full reporting. When reporting is incomplete many of the above services lose their value, and failure or delay may result in illness and death.

Each practicing physician in the State of Virginia should report communicable diseases for the following reasons:

1. Reporting will make possible the application of maximal control measures in the prevention of illness and death in the community.
2. Reporting is a legal and ethical obligation of every practicing physician.
3. Reporting will frequently lighten the physician's responsibilities to his patients and his community.
4. Reporting will materially assist his reputation as a conscientious physician.

Each physician is urgently requested to report promptly to the local or state health officer all communicable diseases within his practice. The information reported will be treated confidentially.

Schering Sponsors Campaign for Nurses.

The serious shortage of graduate nurses in the country caused Schering Corporation of Bloomfield and Union, New Jersey, to support a campaign to induce more young women between the ages of 18 and 35 years to enter the nursing profession.

This campaign, presented in local New Jersey newspapers, was conducted with the cooperation of the Blue Cross Plans and the hospital and nursing organizations of America. The inducement presented to prospective young nurses included the advantage of salaries paid to nurses as compared to those paid to office workers, library employees, teachers, and personnel of high schools and colleges. The greater sum saved weekly by nurses after expenditures for food and rent, was pointed out in the campaign.

Schering Corporation, manufacturers of endocrine, x-ray diagnostic, chemotherapeutic and pharmaceutical products, supported this program as another step in its service to the allied professions.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President—MRS. J. E. HAMNER, Petersburg
President-Elect—MRS. J. L. DECORMIS, Accomac
Recording Secretary—MRS. M. H. HARRIS, West Point
Corresponding Secretary,
MRS. MEADE EDMUNDS, Petersburg
Treasurer—MRS. REUBEN SIMMS, Richmond
Editorial Chairman MRS. E. HOLLAND TROWER, Eastville

Chairmen of Committees.

Chairmen of STANDING COMMITTEES of the Woman's Auxiliary to the Medical Society of Virginia, for the current year, are:

Hygeia—Mrs. W. M. Phipps, Hopewell
Legislation—Mrs. J. Powell Williams, Richmond
Organization—Mrs. P. M. Chichester, Richmond
Editorial—Mrs. E. Holland Trower, Eastville
Program—Mrs. C. M. McCoy, Norfolk
Public Relations—Mrs. R. M. Reynolds, Norfolk
Revisions—Mrs. E. Latane Flanagan, Richmond

Chairmen of SPECIAL COMMITTEES are:

Bulletin—Mrs. W. Clyde West, Alexandria
Cancer Control—Dr. Matilda Chalkley, Richmond
Finance—Mrs. Hawes Campbell, Richmond
Jane Todd Crawford Memorial—Mrs. J. H. Scherer, Richmond
Leigh-Hodges-Wright Memorial—Mrs. Fletcher J. Wright, Sr., Petersburg
Membership—Mrs. Robert Hightower, Alexandria

Auxiliary News.

RICHMOND

The regular monthly meeting of this Auxiliary was held November 15th, in the Academy of Medicine Building, with Dr. Matilda Chalkley presiding.

Mrs. P. M. Chichester, former State president of the Woman's Auxiliary to the Medical Society of Virginia and present chairman of organization, was the guest speaker. She spoke on *Hygeia* and *The Bulletin*, and gave a resume of the State meeting held in October at Virginia Beach.

Mrs. Emmett Mathews, luncheon chairman, was assisted by Mrs. James Blades and Mrs. W. H. Copley.

MYRTLE G. MORTON (MRS. W. R.),
Publicity Chairman.

ARLINGTON

The meeting of the Woman's Auxiliary to the Arlington County Medical Society was held at the Washington Golf and Country Club on December 5th, with 25 members present. We elected, by secret ballot, and Mrs. L. O'Connor Moss was named President-elect. An addition to the By-Laws was adopted that the fee for Associate Members will be $2.00 a year; those eligible shall be wives of doctors who are active members of any other Medical Society. Bridge and refreshments followed the meeting.

On November 22nd, the Auxiliary gave a bridge party at the Washington Golf and Country Club. Each member was asked to make up a table at $1.00 per person. There was a door prize and a prize for each table. Two cakes, donated by members, were raffled off, and several pairs of nylon hose. Refreshments were served. The Auxiliary netted $100.00.

ELEANOR C. DETWILER (MRS. ROBERT H.).
Chairman, Press and Publicity.

PETERSBURG

The Petersburg Auxiliary met at the home of Mrs. Robley C. Allison on November 26th. The guest speaker, Dr. Leta J. White, who is chairman of the Advisory Council of the State Auxiliary, gave a most interesting lecture on her trip to Brazil, emphasizing the social and medical conditions there.

At the request of The Red Cross, fifteen Christmas boxes for hospitalized service men at Camp Lee were donated.

The sum of $76.00 was realized from a rummage sale held on November 29th and 30th, under the chairmanship of Mrs. C. S. Dodd.

The Auxiliary plans to hold its annual linen shower in February.

After the business meeting a social period with the serving of delicious refreshments was greatly enjoyed.

Officers for the year 1947 are as follows: President, Mrs. Robley C. Allison; vice-president, Mrs. C. W. Lynn; recording secretary, Mrs. Munford Yates; treasurer, Mrs. F. N. Taylor; historian, Mrs. J. F. Phillips; and parliamentarian, Mrs. F. J. Wright, Sr.

GRACE J. ALLISON (MRS. R. C.)

BOOK ANNOUNCEMENTS

Books received for review are promptly acknowledged in this column. In most cases reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Medical Uses of Soap. A symposium by R. L. BAER, M. D., I. H. BLANK, Ph.D., THEODORE CORNBLEET, M. D., MORRIS FISHBEIN, M. D., G. THOMAS HALBERSTADT, B.S. Ch. E., LESTER HOLLANDER, M. D., EDWIN P. JORDAN, M. D., DANIEL J. KOOYMAN, Ph.D., C. GUY LANE, M. D., CAREY McCORD, M. D., and MARION B. SULZBERGER, M. D. Philadelphia, J. B. Lippincott Company. 1946. xi-195 pages with 41 illustrations. Cloth. Price $3.00.

The Diagnosis and Treatment of Bronchial Asthma. By LESLIE N. GAY, Ph.B., M. D., Assistant Professor of Medicine of the Johns Hopkins University School of Medicine; Director of the Allergy Clinic of the Johns Hopkins Hospital. With a foreword by Warfield T. Longcope, A. B., M. D., Professor of Medicine of the Johns Hopkins University School of Medicine; etc. Baltimore, The Williams and Wilkins Company. 1946. ix-334 pages. Illustrated. Cloth. Price $5.00.

The Chest. A Handbook of Roentgen Diagnosis. By LEO G. RIGLER, M. D., Professor and Chief, Department of Radiology, University of Minnesota. Chicago, The Year Book Publishers. 1946. 352 pages. Illustrated. Cloth. Price $6.50.

The Modern Attack on Tuberculosis. By HENRY D. CHADWICK, M.D., Superintendent of Westfield State Sanatorium, 1909-1929; Tuberculosis Controller of the City of Detroit, 1929-1933; Commissioner of Public Health of the Commonwealth of Massachusetts, 1933-1938; Medical Director of Middlesex Tuberculosis Sanatorium, 1938-1941. And ALTON S. POPE, M.D., Chief, Bureau of Communicable Diseases, Department of Health, Chicago, 1926-1929; Deputy Commissioner of Public Health and Director of the Division of Tuberculosis, Commonwealth of Massachusetts. Revised Edition. New York, The Commonwealth Fund. 1946. xiii-134 pages. Cloth. Price $1.00.

In this small book the authors have presented a summary of the current knowledge concerning epidemiology, diagnosis, and treatment of pulmonary tuberculosis. Treatment is covered in only a general way and primarily from the standpoint of the control of tuberculosis. However, one whole chapter is taken up with the functions of a sanatorium to the community.

The chief purpose of the book is to present in a concise form our present knowledge concerning the epidemiology of tuberculosis and to offer a program for the control and eradication of this disease. Emphasis is placed on the application of procedures now available for the detection of early cases of tuberculosis and on the adequate treatment of all cases of the disease. A comprehensive program of case finding is outlined and the advantages of a central case register are discussed.

In the chapter on epidemiological aspects of tuberculosis the discussions of the pathogenesis and of the predisposing factors are especially well handled. Much of the material in this chapter is new and all has been brought up to date.

This handbook, in its second edition, is written primarily for health officers and administrators of a tuberculosis control program. However, physicians interested in the treatment of pulmonary tuberculosis, especially members of the medical staffs of tuberculosis sanatoria, will also gain a great deal of useful information concerning the overall program of tuberculosis control.

E. S. RAY.

Pneumoperitoneum Treatment. By ANDREW LADISLAU BANYAI, M.D., F.A.C.P., F.C.C.P., Associate Clinical Professor of Medicine, Marquette University Medical School, Milwaukee, Wis.; formerly Preceptor in Tuberculosis, School of Medicine, University of Wisconsin; etc. St. Louis, The C. V. Mosby Company. 1946. 376 pages, with 74 illustrations. Cloth. Price $6.50.

This is a systematic and comprehensive presentation of the treatment of pulmonary tuberculosis and abdominal types of tuberculosis by pneumoperitoneum. It embraces the technique of administration, concomitant physiologic adjustments of the body to intraperitoneal air and the attending complications of this method of treatment. The author stresses its therapeutic application to tuberculous peritonitis, entercolitis, and pulmonary tuberculosis. The acceptance of this method of treatment by an ever increasing number of sanatoria makes this book timely and a valuable reference for those engaged in the treatment of pulmonary tuberculosis.

FRANK PHILIP COLEMAN, M. D.

EDITORIAL

Hospitalization of Maternity and Infant Patients with Complications

THE April 1945 issue of the VIRGINIA MEDICAL MONTHLY carried an editorial on "A Plan for Hospitalization of Indigent Maternity and Infant Patients With Complications". That plan has continued to operate but, until the present time, sufficient funds were not available to include the larger cities with independent health departments. Effective January 1, 1947 provision was made whereby the cities are included. This means that maternity patients having complications and sick infants up to one year of age unable to obtain care because of indigency may be hospitalized. Prematurity in an infant is an acceptable reason for care under this organized plan. The maternity patient may be provided for at any time during the prenatal period, may have delivery service and continue eligible for care up to six months after delivery should a complication develop to make this necessary. No provision under this plan is made for the crippled child or for the chronically ill maternity patient or infant requiring long periods of hospitalization. The seventy-one hospitals accepting patients under this plan are so distributed over the State that they afford reasonable coverage. The amount paid to the hospitals is the cost as determined by the hospital audit. No compensation is provided for the physician other than having the patient at a place where treatment may be convenient and more effective. Indigency is determined by the local referring physician as such a method should rule out criticism that a particular patient is financially able to pay for medical care. It is possible that an occasional undeserving case is managed at public expense but it must be rare since the complaint is infrequent.

The Maternal Health Committee of the State Medical Society has sponsored this plan from its inception and has cooperated with the State Department of Health in promoting its extension. Virginia has the distinction of being the only state having a plan for the care of its indigent maternity and infant patients covering all its localities.

C. J. ANDREWS,
Chairman Maternal Health Committee.

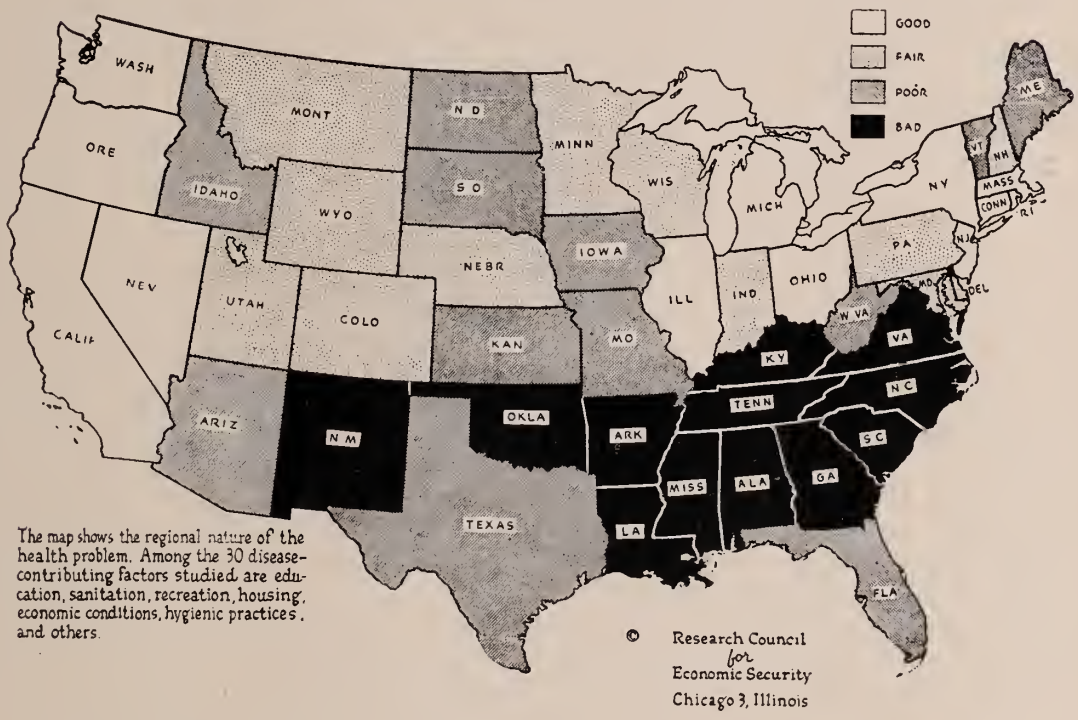
Our National Health Problem

THE above is the title of a recent study by the Research Council for Economic Security, which was distributed by the Insurance Economics Society of America. The map which was a part of the release, shows where Virginia stands in reference to this problem. The grading of the various states as good, fair, poor, and bad was based upon 30 disease-contributing factors grouped under the heads of population, mortality, sanitation, medical facilities, health insurance, economic resources, and culture. "Culture" is compounded of the percentage of illiterates in the population over 10 years of age, the percentage of high school pupils in the total school enrollment in secondary grades, school expenditure per child, expenditures per capita for public recreation by governmental units, and the number of professional and semi-professional workers in labor force per 1000 population. Just how these various factors are weighted we do not know, but in some way they add up to the fact that Virginia ranks 38th among the states.

New England ranks first in heart disease. Also the people in New England reach, on an average, a higher age than in any other region. "Since heart disease is a disease of old age, this explains why more people die from heart disease in New Eng-

land than in any other region. Mortality from heart disease in New England is evidence of long life rather than poor health." On the other hand, of the ten states leading in mortality rates from tuberculosis, eight are in the South.

Even a cursory glance at the tables in the study shows how complex the problem is. The character of the population, urban or rural, white or black, the size of families, economic resources, housing, sanitation and food are some few of the factors that enter into the National Health Problem. All of these vary tremendously geographically. There is no single remedy nor can this remedy be administered from a central point. From time to time we propose to discuss various items in the picture from the standpoint of Virginia. At present we content ourselves with two factors in the health problem that the survey did not cover, i.e., climate and maternal mortality.



The map shows the regional nature of the health problem. Among the 30 disease-contributing factors studied are education, sanitation, recreation, housing, economic conditions, hygienic practices, and others.

Virginia's climate is unsurpassed. Chamber of Commerce figures show that out-of-doors occupations can be followed practically the year round. The same can be said out door sports. We have neither hurricanes nor life-destroying floods. Our climate is free from extremes and yet there is enough variety for our people to enjoy the stimulating effect of change. In the early days when climate began to play a part in the treatment of tuberculosis it was thought that the number of sun-shiny days and a uniform warm temperature were the most important considerations. It was soon found that the most beneficial climate must have a certain amount of diurnal and seasonal variation in order to have a beneficiary stimulating effect.

Virginia's maternal mortality rate has not always been one of which we could be proud. In 1931 the rate was 7.7 per 10,000 live births. Due to the concerted efforts of the Maternal Health Committee, the Health Department, and the doctors and nurses of the State, the rate has steadily declined until now it has reached the low figure of 2.2. Few States have a lower rate. If this can be accomplished in maternal health, it can be done in other fields.

Conference of State Secretaries and Editors

THE Conference of State Secretaries and Editors, December 7th and 8th, differed from previous ones in several respects. In the first place, there was a program committee which was appointed at the San Francisco meeting. In the second place the dinner meeting, after an address by the Hon. A. L. Miller, M.C., split up into two parts, the editors and the secretaries. The secretaries discussed commercial exhibits and problems of management, and the editors what should or should not go into a state journal. In the third place, we were addressed by the Governor of Illinois. And we might say that Governor Green gave us an inspiring address. Our neighbor, Julian P. Price of South Carolina presided over our meeting with humor and efficiency.

A feeling of confidence very definitely pervaded the meeting. At previous meetings there has been an attitude of defense and a feeling of uncertainty as to the future of medicine. This was all gone. As Congressman Miller said, the 80th Congress would be more American than any we have had in years. The recent election had shown that the people are tired of a bureaucratic government and do not want a socialized medicine. Plans for the celebration next year of the centenary of the American Medical Association were discussed. Organized Medicine has confidence in itself at last. Instead of defense tactics its accomplishments were to be discussed.

Figures show that the American people spend 3,400,000,000 dollars a year on medical care. Medicine has become big business, and needs big business methods of producing better public relations. Medical men, individually and collectively, are interested primarily in safeguarding the health of the nation. We must let the people know in every way possible our aims and purposes. A sizable portion of the public thinks that medical service costs too much, little realizing what it has cost and is costing the doctor to render such service. Admittedly, medical care costs more than ever before, but it is equally true that the public gets more for its medical dollar than ever before in the history of the world. We must let the public know that. Another part of the public thinks, and says, that the distribution of medical care is poor, and in many parts of the country unobtainable. Steps are now being taken to see if this is true. Highway maps have been sent to every county medical society upon which they can plot their spheres of activity. When these are returned, and it is hoped that they will be returned promptly, Organized Medicine will know just where it stands in regard to the distribution of medical care. Another part of the public wants a hand in management because Medicine is doing a good job and is getting results. Some of this executive ability might come in handy. It has certainly proven so in the hospital service plans, and its use would promote better public relations.

Large Decline in Mortality From Degenerative Diseases

WE have become used to the lengthening of the average span of human life until now it has reached the unbelievable figure of 63 years. The phenomenal reduction of fetal mortality no longer excites comment. We feel confident about our control and cure of infectious diseases. That there is a decline in the mortality from the degenerative diseases comes as a surprise. It is true that the crude death rate from cardiovascular-renal disease—that is, the figure before correction is made for the increasing age of the population—is higher than it was thirty years ago, but if correction be made for the changes in age distribution there is a marked reduction in the rates. According to the Statistical Bulletin, the death rate from these diseases of the policy holders of the Metropolitan Life Insurance Company, which constitutes a large cross

section of the urban population of the U.S. and Canada, has dropped virtually 30% when corrected for the aging of the insured. This is particularly evident among white females where the corrected death rate has declined 37%. Each age group in this sex registered a material and almost continuous improvement, with the result that recent years have witnessed minimum rates at every age period. Up to the age of 25 the decline in death rate has been equally rapid for both sexes. Beyond this age, the record for the men has not been as favorable as that for the women. The general decline in the mortality from the principal cardio-vascular-renal diseases is attributed to a number of factors. In young people a very large proportion of deaths from these diseases results from previous infarctions. The decrease in heart and kidney affections reflects the successful attack upon the germ diseases of infancy and childhood. The decrease in the death rates from the degenerative diseases in adult life also reflects in part the successful treatment of germ diseases in childhood and in part the more intensive treatment of syphilis. Among women at the reproductive ages the lessened frequency of childbearing has undoubtedly been a factor. "At all ages and in each sex, such general factors as more and better medical care, better nutrition, and generally higher standards of living have contributed toward preventing premature physical breakdown."

SOCIETIES

The Tazewell County Medical Society,

At its meeting on December 5, admitted several doctors to membership, and elected the following officers for the coming year: President, Dr. James Peery, Richlands; vice-president, Dr. H. A. Porter, Boissevain; and secretary-treasurer, Dr. W. R. Strader, Richlands.

The Fourth District and Southside Virginia Medical Society

Had its last meeting on December the 10th, at which time the following officers were elected for the coming year: President, Dr. C. Edward Martin, Emporia; vice-presidents, Dr. W. M. Phipps, Hopewell, and Dr. L. H. Bracey, South Hill; secretary-treasurer, Dr. William S. Sloan, Petersburg; and chairman of the Steering Committee, Dr. Fletcher J. Wright, Jr., Petersburg.

The Mid-Tidewater Medical Society.

At the October meeting of this Society, the scientific program included papers by Dr. Douglas Chapman and Dr. R. D. Bates, Jr., of Richmond. Officers elected at this time for the ensuing year are: President, Dr. John R. Gill, Mathews; vice-presidents, Dr. R. D. Bates, Newtown; Dr. J. M. Gouldin, Tappahannock; Dr. A. W. Lewis, Jr., Aylett; Dr. H. A. Tabb, Gloucester; Dr. A. L. Van Name, Urbanna; Dr. Clarence Campbell, Sparta; and Dr. R. B. Bowles, Mathews; secretary-treasurer, Dr. Malcolm H. Harris (re-elected), West Point. Meetings are held quarterly.

The Patrick-Henry Medical Society,

At its October meeting, elected the following officers for 1947: President, Dr. W. Brown Dudley, Martinsville; vice-president, Dr. D. L. Fleshman, Bassett; and secretary-treasurer, Dr. Mason Rowe, Martinsville.

Augusta County Medical Association.

The regular quarterly session of this Association was held in Staunton, November 6th, under the presidency of Dr. G. Edmund Stone. Guest speaker was Dr. T. J. Williams, University, whose subject was Hypertension in Pregnancy. Dr. Leland Brown spoke on Management of Normal Delivery, and Dr. Kenneth Bradford gave a case report on Spontaneous Pneumothorax Complicating Virus Pneumonia. Dr. B. H. Payne, Staunton, is secretary of the society.

Wise County Medical Society.

There was an attendance of nineteen at the dinner meeting of this Society in Norton on December

the 4th, following which Dr. E. W. Kirby gave a most interesting lecture on Urological Problems in Children. This was illustrated by pictures and specimens, and was followed by a question period which held the interest of all for forty-five minutes. Dr. W. R. Lundy spoke at length and there was considerable discussion of the business problems ahead. Dr. J. D. Culbertson of Coeburn is president, and Dr. Thomas J. Tudor of Norton, secretary-treasurer.

Virginia Peninsula Academy of Medicine.

The guest speaker at the regular meeting of the Academy on December 16 was Dr. Fletcher D. Woodward, Professor of Otolaryngology at the University of Virginia, who came upon invitation of Dr. George G. Hankins of Newport News. He talked on Diseases of the Esophagus. Dr. Robert H. Wright of Phoebus is president and Dr. C. D. Bradley of Newport News secretary of the Academy.

Roanoke Academy of Medicine.

At the December meeting of the Academy, the following scientific program was presented: Fatal Pulmonary Emboli in a Patient Two Months Pregnant by Dr. Duvahl Ridgeway; Some Observations on the Current Upper Respiratory Epidemic in Infants and Children by Dr. J. T. Humphries; and Medical Aspects of Thrombophlebitis by Dr. Robert C. Crawford. Dr. Charles A. Young, Sr., is president of the Academy and Dr. Wade Saunders secretary-treasurer.

NEWS

Annual Meeting, Medical Society of Virginia.

As Hotel Roanoke had only two dates open which were suitable for the meeting of the Society, Dr. W. L. Powell, President, canvassed members of the Council by letter as to the selection of a time for the State meeting, and dates were named as October 13-15.

Dr. Frank A. Farmer, Medical Arts Building, Roanoke, has been named by the Roanoke Academy of Medicine as chairman of the Committee of Arrangements for the meeting.

Are You a Fellow?

THE AMERICAN MEDICAL ASSOCIATION is going to celebrate its centennial in Atlantic City, June 9-13, 1947. Elaborate plans are being made for this celebration.

Only Fellows and Invited Guests are eligible to attend. Membership in your state society is the primary qualification for Fellowship in the A.M.A. Fellowship dues and subscription to *The Journal A.M.A.* are both included in one annual payment of $8.00, which is the cost of *The Journal* to subscribers who are not Fellows.

If you are not a Fellow and plan to attend the Atlantic City session, which will be a milestone in medical history, you can save yourself considerable time and confusion when registering, if you will *write now* to the American Medical Association, 535 North Dearborn Street, Chicago 10, and ask if you are eligible to become a Fellow.

State's Health Services Expanded.

Expansion of health districts in Virginia, which was slowed during the war because of lack of personnel, has received an impetus by the extension of health services to nine additional counties. Of these, Goochland, Powhatan and Amelia will form a new district, while Campbell, Amherst, Fauquier, Caroline, Charles City and New Kent will be added to existing units. For sometime, only 51 of Virginia's one hundred counties have had health services but it is hoped to have 69 included very shortly as local funds have already been appropriated in nine more counties, and State and Federal matching money is on hand for use as soon as personnel can be employed for them.

Southern Medical Association.

At the meeting in Miami, Dr. E. L. Henderson of Louisville, Ky., succeeded Dr. M. Y. Dabney to the presidency and Dr. Lucien A. LeDoux of New Orleans was named president-elect to take office next year. Dr. Oscar B. Hunter of Washington, D. C., and Dr. Robert T. Spicer of Miami were elected vice-presidents.

Postwar Questionnaire.

The American Medical Association has sent a questionnaire to all medical officers who served in World War II, so far as they have been able to secure names and addresses, to secure information which may be made available in case of further emergency. There are a few copies available in the office of the Medical Society of Virginia and this office will be glad to send copy to any former medical officer who advises he has failed to receive his copy from the A. M. A.

Seaboard Medical Association of Virginia and North Carolina.

The annual meeting of the Association was at Kinston, N. C., December 3-5, under the presidency of Dr. Thomas Leslie Lee of that city. There was a large attendance of members and their wives and a good scientific program and several entertainments combined to make this an outstanding meeting. The Cavalier at Virginia Beach was selected as the 1947 place of meeting, and the following officers were elected: President, Dr. O. R. Yates, Suffolk; vice-presidents, Dr. D. H. Bridger, Bladenboro, N. C.; Dr. Walter P. Adams, Norfolk; Dr. H. H. Foster, Norlina, N. C.; Dr. Charles H. Lupton, Norfolk; and secretary-treasurer, Dr. Clarence Porter Jones, Newport News. This will be Dr. Jones' thirty-eighth term in this office.

To Head DeJarnette Sanatorium.

Dr. Hugh Page Newbill has been appointed superintendent of DeJarnette State Sanatorium at Staunton to succeed Dr. J. S. DeJarnette who resigned in July 1945, thus concluding a period of continuous service with the State which was begun in July 1889.

Dr. Newbill has been assistant professor of psychiatry at the University of Virginia School of Medicine, and was associated with Dr. David C. Wilson in the operation of the Davis Clinic of that hospital. Dr. Newbill entered upon his new duties January 1.

President of the American Medical Association Visits Virginia.

Dr. Harrison H. Shoulders, president, American Medical Association, visited Newport News on November 26 where he spoke before the Peninsula Institute of Public Affairs on government control of medicine. Prior to the meeting Dr. Shoulders was entertained at a cocktail party and dinner at the James River Country Club, arranged by the Virginia Peninsula Academy of Medicine, the Warwick County Medical Society and the Elizabeth City County Medical Society jointly. Present were almost 200 persons, including the wives of Peninsula civilian doctors, Veterans Administration, Army, Navy, and Public Health. Among the out-of-town guests was Dr. W. L. Powell of Roanoke, president, Medical Society of Virginia.

After Dr. Shoulders had spoken at the Newport News High School Auditorium, he was entertained by the Peninsula Junior Chamber of Commerce, which organization sponsors the Institute of Public Affairs. Dr. Shoulders came to address the Newport News audience at the request of the president of the Virginia Peninsula Academy of Medicine, Dr. Robert H. Wright of Phoebus.

A. M. A. Plans for Centennial Session.

The American Medical Association will celebrate its centennial in Atlantic City, June 9 to 13, 1947.

Arrangements call for "making it one of the greatest and most interesting medical assemblages ever convened," according to an editorial in *The Journal.*

"Each of the scientific sections of the American Medical Association has been authorized to secure a distinguished speaker from abroad and to include also in its program a review of medical progress in the specialty concerned for the hundred year period," states the editorial. "Each of the general scientific meetings will provide for the presentation of three papers constituting reviews of the advancement in the fields discussed, followed by panel discussions on such subjects as the modern management of heart disease, emergency surgery and antibiotics in therapy."

Another highlight of the centennial session is "the utilization of Sunday, June 8, as a special public health day. A religious program is being arranged with representatives of the leading faiths of our country. This will be held in the great auditorium in convention hall and will no doubt be broadcast on one of the national chains. At the same time congregations assembled for religious services elsewhere throughout the nation will be given messages regarding the advancement of medical science and the improvement in the public health that have occurred during the hundred year period.

"The division of motion pictures in the head-

quarters office of the American Medical Association is at present engaged in the development of two motion pictures dealing with the lives of the distinguished American physicians of the period concerned and with the evolution of motion pictures in medical teaching. The first public showings are contemplated for Monday evening, June 9. . . ."

The President's Reception will be among some of the many other features planned for the centennial celebration. *The Journal* editorial states that "distinguished foreign guests, as well as the officers of the American Medical Association, will on that occasion be honored at the reception, and music will be provided by one of the leading orchestras of the nation."

Dr. Morris Fishbein, editor of *The Journal,* is writing a history of the American Medical Association which is appearing serially in *The Journal.* The complete work will be published in book form and will be available for the centennial celebration.

The Maternal Health Committee

Of the Medical Society of Virginia met December 12, in the Richmond Academy of Medicine Building, with the following members present:

Dr. C. J. Andrews, *Chairman,* Norfolk
Dr. A. L. Carson, Jr., Richmond
Dr. G. N. Carter, Boydton
Dr. A. M. Groseclose, Roanoke
Dr. C. A. Nunnally, Fredericksburg
Dr. W. R. Payne, Newport News
Dr. F. O. Plunkett, Lynchburg
Dr. M. P. Rucker, Richmond
Dr. L. L. Shamburger, Richmond

Among the things discussed were: Arrangements for hospitalization of medically indigent maternity patients with pathology; uniform reporting of stillbirths by the several States; the present status of the survey of maternal deaths and the editing of the reports for the VIRGINIA MEDICAL MONTHLY.

Dr. Brock D. Jones, Jr.,

After a residency at Philadelphia Lying-In Hospital, has returned to Norfolk and re-opened his office at 413 Medical Arts Building, for the practice of gynecology and obstetrics.

Dr. John B. Bullard,

Richmond, announces removal of his office from 807 to 912 West Franklin Street.

Chilean Hospital Program Making Rapid Progress.

Chile's war against tuberculosis, the chief cause of death in the nation, will gain new impetus this year with the completion of the new 500-bed Trudeau hospital in Santiago. Dr. Theodore I. Gandy, chief of the Institute of Inter-American Affairs medical mission in the Chilean capital, points out that the death rate for tuberculosis in the province of Santiago averaged 327.6 per hundred thousand persons from 1934 through 1943.

The Trudeau hospital is being built as a project of the joint Chilean-United States Inter-American Cooperative Department of Public Health Works. The organization has also given technical assistance in the design and construction of an addition to a tuberculosis sanitorium at San Jose de Maipo, and has planned and is helping to build a 120-bed addition to the Franklin D. Roosevelt tuberculosis sanitorium at Guayacan. It also has provided equipment for the recently completed Carabineros Hospital in Santiago.

This hospital building program is only a nucleus for future developments. For instance, in the case of the Trudeau hospital, the plans leave places for many new pavilions to be constructed by the Chilean government.

The joint Chilean-United States public health organization also has built three model health centers at Antofagasta, Santiago, and Valparaiso, and a fourth is under construction at Temuco. The centers seek to demonstrate what can be accomplished by environmental sanitation and preventive medicine.

Married.

Dr. William Vincent Rucker, Bedford, and Mrs. Emilie McClain Warnock, Philadelphia, November 28th. Dr. Rucker is a graduate of the University of Pennsylvania, Department of Medicine, in 1935, and served in the Medical Corps of the Army during the recent War.

Dr. Robert Emerson Fultz, Butterworth, and Miss Dorothy Anne Chapman, Mountsville, S. C., November 30th. He is a graduate of the Medical College of Virginia, class of 1946, and is at present serving an internship at Johnston-Willis Hospital, Richmond.

Captain J. F. Terrell Retired.

After twenty-eight years in the U. S. Navy, Dr. Terrell retired on November 4th at which time he and his wife were guests of honor at a dinner and dance given at Port Hueneme, California, where he has been senior medical officer for the past two years. Upon leaving the Service, Dr. Terrell accepted the superintendency of Pima County Hospital in Tucson, Arizona. He is a graduate of the Medical College of Virginia, class of 1918.

Dr. Everett O. Jeffreys,

Division of Neurological Surgery, Bowman-Gray School of Medicine, Winston-Salem, N. C., was guest speaker before the Norfolk County Medical Society on December the 9th, his subject being "Certain Types of Headaches Which Are Amenable to Surgical Treatment".

Deadline.

May 1, 1947, is the deadline for entering the $34,000 prize art contest on the special subject of "Courage and Devotion Beyond the Call of Duty" (on the part of physicians in war and in peace). This contest is open to all M. D.'s in the Western Hemisphere. The exhibition will take place in conjunction with the A. M. A. Centennial Session at Atlantic City, June 9-13, 1947. For complete information, write or wire now to Francis H. Redewill, M. D., Secretery, American Physicians Art Association, Flood Building, San Francisco, California, or to the sponsor, Mead Johnson & Company, Evansville 21, Ind., U. S. A.

National Conference on Medical Service.

The 20th annual meeting of the National Conference on Medical Service will be held at the Palmer House, Chicago, on February 9. Registration will commence at 9:00 A. M. and the program will include discussions in the fields of national affairs, economics and medical education. All physicians are invited to attend; there is no registration fee. Dr. Cleon A. Nafe, Indianapolis, is President of the Conference and Dr. Creighton Barker, New Haven, is the Secretary.

Dr. C. B. Martin,

Formerly of Nokesville, announces his return from military service and resumption of practice at Manassas.

On Governor's Advisory Board.

Governor Tuck, early in December, appointed Dr. Patrick H. Drewry, Jr., Dr. Claude L. Neale, Dr. George S. Fultz and Dr. Harry Brick, all of Richmond, as members of his advisory board on mental hygiene. Others already serving on this board are: Dr. J. E. Barrett, Dr. Finley Gayle, Dr. Howard Masters, Dr. J. A. Shield and Dr. J. K. Hall of Richmond; Dr. J. R. Blalock, Marion, Dr. M. S. Brent, Petersburg; and Dr. F. H. Redwood, Norfolk.

Southern Surgical Association.

There was an excellent attendance at the annual meeting of the Association at Hot Springs, Va., December 10-12, under the presidency of Dr. Daniel C. Elkin of Atlanta. A number of doctors were admitted to membership, those from Virginia being Dr. E. C. Drash, Charlottesville, and Dr. Donald S. Daniel, Richmond. It was decided to hold the 1947 meeting at Hollywood, Fla., and the following officers were elected: President, Dr. Frank S. Johns, Richmond; vice-president, Dr. Frank Wilson, Birmingham; secretary, Dr. Alfred Blalock, Baltimore; and treasurer, Dr. Carrington Williams, Richmond.

New Fellows in American College of Surgeons.

During the Clinical Congress of the Convocation of the American College of Surgeons held in Cleveland, December 20th, the following doctors from Virginia were received into fellowship:

Elton M. Alrich	Charlottesville
Rudolph F. Antoncic	Pulaski
E. Lynwood Bagby	Richmond
Hugh Clark	Winchester
George G. Hankins	Newport News
William R. Hill	Richmond
Charles F. James, Jr.	Appomattox
Paul J. Nutter	Richmond
Philip Oden	Richlands
Edwin W. Shearburn	Charlottesville
Francis B. Teague	Martinsville

Dr. Walter D. Bigford,

Who interned at the Medical College of Virginia in 1943, and was surgical resident at the Chesapeake and Ohio Hospital, Clifton Forge, 1944-1946, announces the opening of his offices for general practice, December 1, at Port Edwards, Wisconsin.

The National Conference on Rural Health

Will hold its second annual meeting at the Palmer House in Chicago, on February 7 and 8.

It is hoped this conference will give the doctor and the farmer an opportunity to exchange views regarding many questions which are of vital importance in developing a better health service in rural communities throughout the United States. Further information may be obtained from Dr. F. S. Crockett, chairman, Committee on Rural Medical Service of the American Medical Association.

Dr. Claude C. Coleman,

Richmond, a pioneer in neurological surgery, will serve the Veterans Administration in an advisory capacity on the overall medical care for veterans. He was one of nineteen nationally recognized doctors, nurses and social workers and dietitians recently appointed by the agency to advise it. Members will act in an advisory capacity to General Omar N. Bradley, Administrator of Veterans' Affairs, and Dr. Paul R. Hawley, chief of the VA's department of medicine and surgery, on overall policies concerning medical service to veterans.

During the war Dr. Coleman served as civilian consultant in neurological surgery to the Surgeon General and was awarded a citation by the War Department. He also served on the neurosurgical committee of the National Research Council during the war years.

News from the University of Virginia, Department of Medicine.

The Thirteenth Annual Post-Graduate Course in Ophthalmology and Otolaryngology was held at the University of Virginia Medical School on December 9, 10, 11 and 12, the following lecturers appearing on the program:

Dr. Bernard Samuels, Surgeon and Pathologist, New York Eye and Ear Infirmary
Dr. E. Burchell, Director Eno Laboratory, New York Eye and Ear Infirmary
Dr. Alan C. Woods, Ophthalmologist-in-Chief, Johns Hopkins Hospital, Baltimore
Dr. A. D. Ruedemann, Cleveland Clinic, Ohio
Dr. S. Judd Beach, Ophthalmologist, Maine Eye and Ear Infirmary
Dr. Dean M. Lierle, Professor of Otolaryngology and Oral Surgery, University of Iowa
Dr. Gabriel Tucker, Professor of Broncho-Esophagology, Graduate School, University of Pennsylvania
Dr. John Marquis Converse, New York City
Dr. J. M. Robison, Professor of Otolaryngology, University of Texas
Mr. J. M. Mullendore, Assistant Professor of Speech Education and Director of Speech Clinic, University of Virginia
Dr. Francis H. McGovern, Danville, Virginia
Dr. George Cooper, Jr., Associate Professor of Roentgenology, University of Virginia
Dr. G. Slaughter Fitz-Hugh, Assistant Professor of Otolaryngology, University of Virginia

Dr. Fletcher D. Woodward delivered four lectures before the Post-graduate Medical Assembly of South Texas December 3, 4 and 5 at Houston, Texas. He spoke before the Peninsula Academy of Medicine on December 16th at Newport News, Virginia.

On December 13th, Dr. Henry B. Mulholland, Professor of the Practice of Medicine, spoke before the staff of the Piedmont General Hospital in Altavista, Virginia, on the Anti-biotic Drugs.

Mississippi Valley Medical Society 1947 Essay Contest.

The Seventh Annual Essay Contest of the Mississippi Valley Medical Society will be held in 1947. The Society will offer a cash prize of $100.00, a gold medal, and a certificate of award for the best unpublished essay on any subject of general medical interest (including medical economics and education) and practical value to the general practitioner of medicine. Certificates of merit may also be granted to the physicians whose essays are rated second and third best. Contestants must be members of the American Medical Association who are residents of the United States. The winner will be invited to present his contribution before the Twelfth Annual Meeting of the Mississippi Valley Medical Society to be held at Burlington, Iowa, October 1, 2, 3, 1947, the Society reserving the exclusive right to first publish the essay in its official publication—the *Mississippi Valley Medical Journal* (incorporating the *Radiologic Review*). All contributions shall be typewritten in English in manuscript form, submitted in five copies, not to exceed 5000 words, and must be received not later than May 1, 1947. The winning essays in the 1946 contest appear in the 1947 issue of the *Mississippi Valley Medical Journal* (Quincy, Illinois).

Further details may be secured from Harold Swanberg, M.D., Secretary, Mississippi Valley Medical Society, 209-224 W. C. U. Building, Quincy, Illinois.

Symposium on Therapy.

The continuance education department of the Medical College of Virginia will present a "Symposium on Therapy" at the College on February 18 and 19. The program will consist of 15-minute presentations covering a wide range of subjects, as well as panel discussions on "Peptic Ulcer Therapy", "Management of Blood Disorders", and "Chemotherapy". All physicians are invited to attend, and there will be no charge. The tentative program is as follows:

TUESDAY, FEBRUARY 18, 1947

9:00- 9:15—Treatment of Rheumatic Fever. Dr. Louise Galvin.
9:15- 9:30—Management of Cardiac Failure. Dr. J. M. Hutcheson.
9:30- 9:45—Treatment of Phlebitis and Its Complications. Dr. I. A. Bigger.
9:45-10:00—Management of Hypertension. Dr. W. B. Porter.
10:00-10:15—Treatment of Urinary Infections. Dr. A. I. Dodson.
10:15-10:30—Treatment of Acute Pelvic Infection. Dr. Randolph Hoge.
10:30-10:45—Treatment of Dysmenorrhea. Dr. Henry Spalding.
10:45-11:00—Management of Thyrotoxicosis. Dr. Elam Toone.
11:00-11:15—Intermission.
11:15-11:30—Treatment of Bacterial Pneumonia. Dr. J. H. Smith.
11:30-11:45—Treatment of Viral Respiratory Infections. Dr. M. M. Pinckney.
11:45-12:00—Management of Suppurative Lung Disease. Dr. Porter Vinson.
12:00-12:15—Treatment of Non-Tuberculous Empyema. Dr. Dean Cole.
12:15-12:30—Treatment of Sinusitis. Dr. E. Wallerstein.
12:30-12:45—Treatment of Migraine. Dr. Warrick Thomas.
12:45- 1:00—Use of Anti-Histaminic Drugs. Dr. Emmett Matthews.
1:00- 2:30—Lunch. Panel Discussion on "Treatment of Peptic Ulcer", led by Drs. T. N. Barnett, Carrington Williams, T. D. Davis, T. T. Thompson, and C. M. Caravati.
2:30- 2:45—Management of Burns. Dr. Everett I. Evans.
2:45- 3:00—What Insulin Should You Use? Dr. William Jordan.
3:00- 3:15—Management of Diabetic Coma. Dr. John Lynch.
3:15- 3:30—Treatment of Acute Cholecystitis. Dr. Frank S. Johns.
3:30- 3:45—Treatment of the Spastic Colon. Dr. J. M. MacMillan.
3:45- 4:00—Management of Gastro-Intestinal Bleeding. Dr. Guy Horseley.
4:00- 4:15—Management of Obesity. Dr. Harry Walker.
4:15- 4:30—Treatment of Chronic Liver Disease. Dr. C. M. Caravati.
4:30- 4:45—Panel on Blood Disorders. Led by Drs. J. P. Baker, J. Powell Williams, J. H. Scherer, and George Z. Williams.

8:00 —Streptomycin. Invited guest.
8:30 —Symposium on Chemotherapy. Led by Drs. H. Haag, S. Page, W. H. Harris, Allen Pepple.

WEDNESDAY, FEBRUARY 19, 1947

9:00- 9:15—Immunization of Children. Dr. Lee Sutton.
9:15- 9:30—Case of the Undernourished Child. Dr. B. B. Jones.
9:30- 9:45—Treatment of Uremia. Dr. Arthur Klein.
9:45-10:00—Treatment of Acute Nephritis. Dr. Kinloch Nelson.
10:00-10:15—Management of Edema. Dr. D. G. Chapman.
10:15-10:30—Recent Advances in Therapy of Syphilis. Dr. Campbell Manson.
10:30-10:45—Treatment of Rheumatoid Arthritis. Dr. W. H. Higgins.
10:45-11:00—Pruritis Ani. Dr. Robert Terrell.
11:00-11:15—
11:15-11:30—When to Use Vitamins.

Another Instructive Program,

To which all physicians are cordially invited, is that of the Virginia Section of the American College of Physicians which will be at McGuire Veterans Administration Hospital, beginning at 1:00 P. M., February 19th. The following scientific program will be presented:

1:00-1:15—Rheumatoid Spondylitis. Dr. Elam Toone.
1:15-1:30—Ductus Arteriosus: Diagnosis and Surgical Indications. Dr. W. B. Porter.
1:30-1:45—Streptomycin in Brucellosis. Dr. Sidney Page.
1:45-2:00—Xanthomatous Biliary Cirrhosis. Dr. T. D. Davis.
2:00-2:15—Nitrogen Mustard in Malignant Lymphomas. Dr. St. George Tucker.
2:15-2:30—Reticulo-endotheliosis. Dr. T. R. Kriz.
2:30-2:45—Intermission.
2:45-3:00—Panniculitis. Case report. Dr. J. Powell Williams.
3:00-3:15—Pneumoperitoneum in Pulmonary Tuberculosis. Dr. W. E. Roye.
3:15-3:30—Vagotomy for Peptic Ulcer. Dr. J. O. Burke.
3:30-3:45—Penicillin in Cardio-Vascular Syphilis. Dr. Reno Porter.
3:45-4:15—Demonstration of Organic Neurologic Cases. Dr. B. Nagler.
4:15-5:15—Panel Discussion of the Above Topics, led by the Essayists.

For Sale.

Eye, Ear, Nose and Throat equipment and instruments. If interested write for detailed list and description. Dr. E. G. Hall, 720 Tyler Avenue, Radford, Virginia. (*Adv.*)

For Sale.

GE X-ray, Model 1775, 30 ma, 85 KVP, table with Bucky. In excellent working condition. James P. King, M. D., Radford, Virginia.

OBITUARIES

Dr. George Franklin Simpson,

A former president of the Medical Society of Virginia, died at his home in Purcellville on December 24th after an illness of several months. He was seventy-seven years of age and graduated from the National University in Washington in 1901, receiving both the degrees of medicine and dentistry. Dr. Simpson had practiced in Loudoun County for almost forty years and had taken an active part in civic and medical affairs of the County. He was a member of the Board of Directors of the Loudoun County Hospital, twice president of the Loudoun County Medical Society, and a former president of the Virginia, District of Columbia, and Maryland Medical Society. Dr. Simpson had always taken an active interest in the Medical Society of Virginia, having served as Councilor, vice-president, as a member of committees, and was elected president at the 1938 meeting. His wife died several years ago.

Dr. Lewis Holladay,

Dean of Physicians of Orange County, died December 10th, at the age of seventy-seven. He received his medical degree from the University of Virginia in 1896 and since that time had practiced in Orange County. Dr. Holladay had been county health officer since he began practice and was the only coroner the county has ever had. He was local surgeon for the C. & O. Railway and a member of the Board of Directors of the National Bank of Orange. Dr. Holladay was a member of the State Board of Medical Examiners, having been appointed in 1911, and served with the exception of two terms until his death. He had been a member of the Medical Society of Virginia for forty-nine years. Three sons and three daughters survive him.

Dr. Flavius Ogburn Plunkett,

Prominent Lynchburg physician, died December 18th after less than a day's illness. He was a native of North Carolina and sixty years of age. He graduated from the former University College of Medicine, Richmond, in 1911, and served overseas during World War I with Evacuation Hospital 40. Dr. Plunkett then became a specialist in obstetrics and gynecology and was considered a pioneer in this field. He was a former president of the South Piedmont Medical Society and the Lynchburg Academy of Medicine and was a member of the South Atlantic Association of Obstetricians and Gynecologists. Dr. Plunkett had been an active member of the Medical Society of Virginia for thirty-five years. At the time of his death he was a member of its Committee on Maternal Health. His wife and three children survive him.

Resolutions on Death of Dr. St. Clair.

On November 17, 1946, as the sunlight announced the dawn, quietly as he had always lived, at his home in Bluefield, West Virginia, Doctor Charlie St. Clair "Crossed The Bar and Put Out to Sea" to say hello to friends who have said goodbye.

Sleep on Soldier of Humanity. Surely a soldier as the one who faces the withering fire of machine guns, a soldier that faced the frost and snow, and kept the long vigil of the lonely night to bring comfort to those in pain, and by wise counsel assured those in despair.

Tazewell County Medical Society trusts a "Happy Landing" and that you are now living in the sunshine of God's love, enjoying a deserved and well earned rest.

"Unto his hands the healing touch
That makes faith whole again;
That comforts and brings cheer,
To every cry of anxious hearts."

WHEREAS, Almighty God has seen fit to take from our midst our friend and co-worker, Dr. Charles T. St. Clair, Sr., and,

WHEREAS, we, the members of The Tazewell County Medical Society, are deeply grieved by his passing and will miss his genial presence and wise counsel,

THEREFORE, BE IT RESOLVED that we extend to his family our deepest sympathy in their sorrow;

BE IT FURTHER RESOLVED that a copy of these resolutions be sent to Dr. Charles T. St. Clair, Jr., and be spread upon the minutes of the Society.

M. B. CROCKETT
J. W. WITTEN
MARY E. JOHNSTON

Dr. John William Preston.

As we go to press, we learn with deep regret of the death on January the 1st of Dr. Preston, of Roanoke, an ex-president of the Society and for many years secretary-treasurer of the State Board of Medical Examiners.

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Old Way...

CURING RICKETS in the CLEFT of an ASH TREE

FOR many centuries,—and apparently down to the present time, even in this country—ricketic children have been passed through a cleft ash tree to cure them of their rickets, and thenceforth a sympathetic relationship was supposed to exist between them and the tree.

Frazer* states that the ordinary mode of effecting the cure is to split a young ash sapling longitudinally for a few feet and pass the child, naked, either three times or three times three through the fissure at sunrise. In the West of England, it is said the passage must be "against the sun." As soon as the ceremony is performed, the tree is bound tightly up and the fissure plastered over with mud or clay. The belief is that just as the cleft in the tree will be healed, so the child's body will be healed, but that if the rift in the tree remains open, the deformity in the child will remain, too, and if the tree were to die, the death of the child would surely follow.

*Frazer, J. G.: The Golden Bough, vol. 1, New York, Macmillan & Co., 1923



It is ironical that the practice of attempting to cure rickets by holding the child in the cleft of an ash tree was associated with the rising of the sun, the light of which we now know is in itself one of Nature's specifics.

New Way...

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February 1947

SYMBOLS OF SIGNIFICANCE

MAPHARSEN

Virginia Medical Monthly

Vol. 74, No. 2.
WHOLE No. 1136.

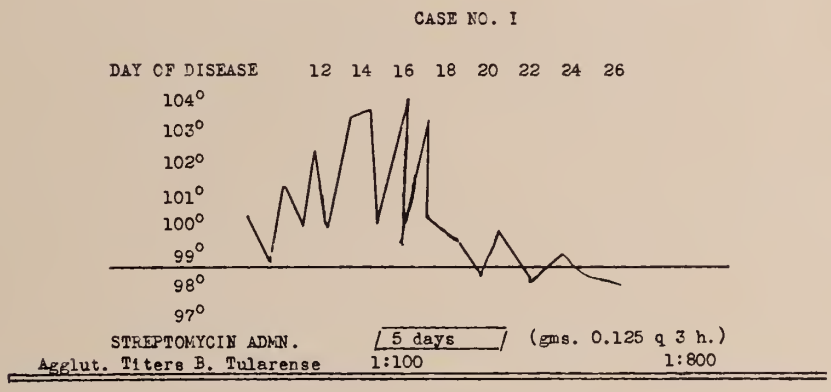
RICHMOND, VA., FEBRUARY, 1947

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THE TREATMENT OF TULAREMIA WITH STREPTOMYCIN— REPORT OF THREE CASES

WELLFORD C. REED, M.D.,
Richmond, Virginia.

During the past year scattered reports have appeared in the literature regarding the treatment of all forms of tularemia with streptomycin. Up to the present time, there is every indication that this new antibiotic will prove just as effective in the control of this infection as preliminary laboratory studies indicated.



Foshay and Pasternack[1] reported seven cases of streptomycin treated tularemia in February, 1946, and emphasized the fact that this drug definitely altered the natural course of the infection. According to these authors, without specific treatment, "the disease usually causes thirty-one days of fever, thirty-one days in bed, a duration of disease of four months, characterized by buboes for 3.5 months, disability for 3.5 months, and healing time for primary lesions of thirty-nine days." Cecil's Textbook of Medicine, Second Edition, published in 1931, notes that the convalescence is slow, and states that it is rare for a patient to be at work again for the end of a month, while some have not returned to normal for six months or even a year.

All but one of the cases reported here were well in less than a month after the onset, and the third case, though symptom-free at the end of the third week, had a small draining sinus from an infected bubo on the back of the neck, which was healed completely at the end of two months.

The streptomycin used in the first two cases was furnished through the National Research Council; the last case was seen after the drug was released for general use. Cases one and three received a total of five grams, given in divided doses of 0.125 gms. each, intramuscularly, every three hours. Case two was treated for seven days, getting a total of seven grams. No toxic reactions were seen.

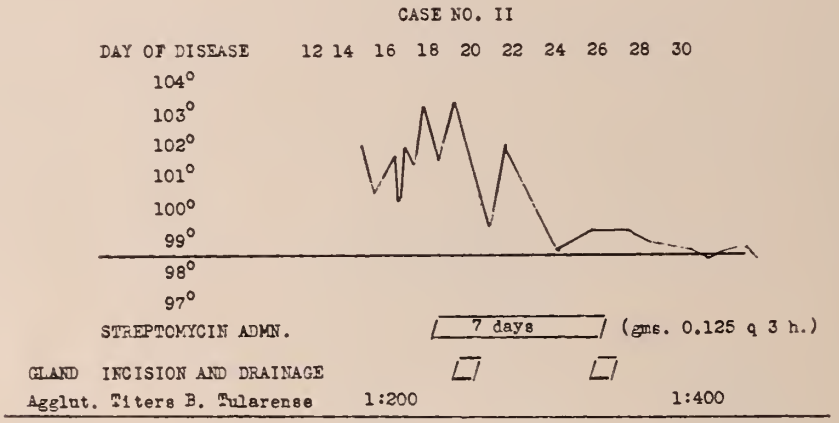
CASE I: J. C. T. was a healthy, twenty-eight year old male, who received a tick bite under the right

arm on May 2, 1946. Three days later there was pain and redness around the site of the bite and he had a chill, followed by a high fever. For the next eleven days he had chills and fever every other day, but was feeling a little better on May 16, 1946, when he was admitted to the hospital. He complained of some pain in the head, and generalized aching, and noticed that with his chills and elevation of temperature, the sore under his arm always became more painful and red. The admission oral temperature was 100.2° and the pulse 86 per minute. There was an ulcerated skin lesion in the posterior axilla on the right, without any noticeable regional lymph node involvement. The skin surrounding the lesion was edematous and dark red. The remainder of the physical examination was negative. The urine was normal, the hemoglobin 98 per cent and the white blood count 9,600, with a normal differential. The Kahn precipitation test was negative.

From the day after admission, twelfth day of the disease, the temperature rose steadily to a peak of 103.8° on the sixteenth day, when streptomycin was started. Two days later the temperature came down promptly and the patient began to feel better. The skin lesion looked dry and the ulcer began to heal from the bottom. At the conclusion of the treatment, which covered a period of five days, the patient felt well and remained out of bed most of the day. Agglutinations for B. tularens were positive 1:100 on the sixteenth day of the disease and on the twenty-second day the titer was 1:800.

Two weeks from the time of admission, the patient left the hospital. When seen on June 28, 1946, and again on December 29, 1946, he was entirely well.

CASE II: S. R., a white male, aged 8 years, lived in the country, kept tame rabbits and frequently found ticks in his hair. He was a neighbor of CASE I, and they were partners in the rabbit business. On May 12, 1946, his mother noticed a small, infected bump in the hair on the back of his head and picked it with a needle. That evening the child's temperature was elevated and the infected area was spreading. He continued to have a high fever for three days and then felt better for thirty-six hours. After that the temperature rose to over 103 degrees and remained high until the end of the second week of his illness (May 26, 1946), when he was admitted to the hospital. At that time a large swollen lymph gland had appeared just below the infected area on the back of the head. The temperature was 101 degrees on admission, and the child was fretful and nervous. There was a large, encrusted lesion on the upper right posterior surface of the neck. The regional cervical lymph nodes were enlarged and tender. The spleen could not be felt. Blood taken on the fifteenth day of the disease, May 27, 1946, gave a positive agglutination test for B. tularens 1:200.



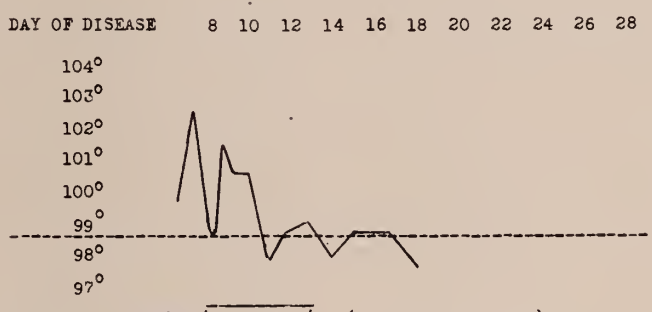
Streptomycin was started on the twenty-ninth day of May, the eighteenth day of the disease, but the temperature rose from 101° to 103°. At first it was thought that the increased temperature was due to drug sensitivity, but later it was found that one of the infected buboes was tender and fluctuating. On June 2, 1946, the gland was incised and drained large quantities of thick, creamy pus. On the following day, the temperature was normal and the patient felt well except for some soreness in the neck. After that his temperature was never over

99.2° and he remained well. The lesion on his neck healed but there was a small draining sinus which persisted for one month after release from the hospital.

CASE III. H. T. R., a 59 year old farmer, had been well until December 5, 1946. On November 23, 1946, he had cut his left thumb. This had been slow healing and cracked open frequently when he used his hands. On December 4, 1946—eight days before admission to the hospital—he found his dogs scuffling over a dead rabbit, so he divided the carcass between them. In doing this, he smeared quite a lot of blood on both of his hands. One day later he began to have a hard chill which was followed by a high fever. The day after that he noticed that there was considerable swelling of the left thumb and the gland under his left arm was swollen and tender. He continued to have some elevation of temperature and generalized discomfort until December 12, 1946, when he was admitted to the hospital. His temperature, which was 99.8° on admission, soon rose to 102.4°. There was some swelling at the base of the left thumb and pus could be seen under the skin edge. The axillary node was red, hot and tender. Total white blood count was 12,500, with a fairly normal differential count. The gross examination of the urine was negative, but the microscopic showed 6-10 WBC and 5-6 RBC per high power field. Agglutinations were negative on the thirteenth day of the disease (December 18, 1946). Continuous hot wet dressings were started, and because his history strongly suggested the possibility of tularemia, he was given streptomycin intramuscularly, 0.125 gms, every three hours. Two days later his temperature was normal, and he was sitting up in a chair. He left the hospital on December 18, 1946, feeling well. The lesion on the thumb had healed and the enlarged axillary node had almost disappeared.

A report from blood sent in for agglutinations by the family physician on December 30, 1946, showed a positive test for B. tularens 1:200.

CASE NO. III



SUMMARY AND CONCLUSIONS

Three cases of tularemia were treated with streptomycin and recovered satisfactorily.

The first two cases were probably contracted from an infected tick; the third from an infected rabbit.

CASE II responded to streptomycin only after an infected regional lymph gland had been incised and drained.

CASE III was interesting because of the unusually short period of incubation, symptoms appearing 24 hours following contact with an infected rabbit.

REFERENCE

1. Foshay, L. and Pasternack, A.B.: Streptomycin Treatment of Tularemia, *J.A.M.A.* **130**:393 (February 16), 1946.

Professional Building.

SOME OBSERVATIONS ON THE CLASSIFICATION AND DIAGNOSTIC CRITERIA OF HEART DISEASES*

R. EARLE GLENDY, M.D.,
Roanoke, Virginia.

INTRODUCTION

Early classifications and criteria for cardiac diagnosis published by White and Myers in 1921[1] and Wycoff and Lingg in 1926[2] form the groundwork for our present nomenclature and criteria for cardiac diagnosis as published by the American Heart Association[3]. Although there still remain a number of gaps in our knowledge of heart disease etiologically, the possibilities of a rather precise cardiac diagnosis in the majority of patients with heart disease have increased tremendously during the past two decades.

In order to be complete, a cardiac diagnosis should include first the *etiological* basis for the disease; second, the *anatomical* lesion or lesions present; and, third, the disturbance in cardiac function that is present. We may go even further and classify patients according to the functional capacity of the heart and or the degree of restriction of physical activity required.

It is not sufficient to simply make a diagnosis of rheumatic heart disease without some further clarification of the structural damage that has occurred to the heart or heart valves; nor should we make an isolated diagnosis of auricular fibrillation or congestive heart failure without indicating the etiologic and anatomic bases for these disturbances in function if known. Alone, they are incomplete as cardiac diagnoses and constitute only disturbances in the cardiac mechanism or function.

It would be impossible within the scope of this paper to cover the entire field of cardiovascular diagnosis, so my purpose will be to call attention to some of the more commonly encountered etiological types of heart disease and to offer some practical suggestions which may be helpful in differentiating them one from another.

HYPERTENSIVE HEART DISEASE

A male patient, aged 49, presented himself for diagnosis, complaining of shortness of breath on effort of increasing severity over a period of four months, and with a past medical history that afforded no helpful clues except fairly frequent headaches and the fact that he was turned down for life insurance at age 45. From this point our search begins with two symptoms—dyspnea and headache. In many instances dyspnea heralds the onset of cardiac insufficiency, but we must remember that dyspnea may be due to other causes than heart disease (such as pulmonary disease or severe anemia) and that the subjective sensation of "shortness of breath" as described by a patient may, in fact, be the feeling of anxiety and inability to get a deep breath, often experienced by neurotic individuals or those with neurocirculatory asthenia. It is important to establish the difference between true dyspnea and the sighing type of respirations encountered in neurotics and those with neurocirculatory asthenia. This particular patient had true dyspnea for which no extracardiac cause was apparent. So we have a symptom that is presumably the result of a disturbance in cardiac function. We must now determine by physical examination and other diagnostic procedures what anatomical changes, if any, have taken place in the cardiovascular system. Physical examination revealed moderate tortuosity of the retinal vessels with some arteriovenous nicking; the radial arteries felt somewhat hard and incompressible to palpation; the blood pressure measured 210 systolic and 120 diastolic; the cardiac apex impulse was forceful and the point of maximum impulse was in the 5th interspace 1½cm. outside the midclavicular line, indicating definite enlargement. The urine showed a 2+ reaction for albumin and a few hyaline and granular casts in the sediment. A 6 ft. film of the chest for heart size and contour confirmed the physical finding of cardiac enlargement and revealed some tortuosity of the aorta. The electrocardiogram showed well-marked left axis deviation with some inversion of the T-waves in lead I, a definite hypertensive pattern.

Altogether these findings are typical of full blown hypertensive heart disease, and we need search no further to establish a complete cardiovascular diagnosis which was recorded as follows:

*Read before the annual meeting of the Old Dominion Medical Society, at Roanoke, Va.

1. Hypertensive heart disease to cover the *etiologic* diagnosis.

2. Moderate cardiac enlargement and tortuosity of the aorta to indicate the *anatomic* changes that have occurred, and we might add, parenthetically, the fact that vascular damage was present in the eye grounds (hypertensive retinopathy) and kidneys (nephrosclerosis) and,

3. Finally, left ventricular weakness, or failure, to indicate the *functional* status of the heart.

To arrive at such a diagnosis is comparatively simple when so many changes have occurred to point to the correct etiologic, anatomic, and functional bases for the disease. However, it is not always easy to assess the extent of damage that has occurred to the cardiovascular-renal system from hypertension when the heart and kidneys are still fully compensated and the patient essentially symptom free. It is during this stage of the disease that we must furnish our patients with a careful hygienic program and be constantly on the alert for danger signals that might indicate further curtailment of their activities or symptomatic or supportive measures.

CORONARY HEART DISEASE

A second patient, a male, aged 54, gave a history of pain beneath the breast bone occurring on effort, particularly after meals, and relieved by cessation of activity, which symptom had been present for six or seven months. Several hours before I saw him, while sitting at his desk, he developed a "heavy, squeezing" sensation beneath the lower end of the sternum which gradually increased in severity, spread across the chest, and radiated down the left arm. The pain persisted, was attended by cold perspiration, pallor, restlessness, and inability to obtain relief from repeated doses of soda. Later he became nauseated and vomited several times. Only after the administration of atrophine, gr. 1/100, aminophyllin, gr. 7½, and 3/4 gr. of morphine over a period of one hour did he obtain any relief from his distress. His blood pressure measured 90/60.

With such a clinical history, none of us would fail to recognize the classical picture of coronary thrombosis or occlusion, but, if we reflect for a moment, it is apparent that coronary thrombosis or occlusion signifies only the *anatomic* lesion responsible for such a disaster. So if we are consistent, we must once more indicate the etiologic basis for the changes present, which in the vast majority of cases is arteriosclerosis. The complete cardiac diagnosis in this particular instance included the following:

1. *Arteriosclerotic or coronary* heart disease (etiologic)

2. Coronary occlusion with myocardial infarction (anatomic)

3. Anginal syndrome (indicating a *functional* insufficiency of the heart due to narrowing and/or spasm of the coronary arteries).

Volumes have been written concerning the differential diagnosis of chest pain, but we can never overemphasize the importance of this problem that constantly confronts us in practice. To mention only a few of the conditions that may be confused with coronary insufficiency or occlusion, they include:

1. Pulmonary embolism, an ever present complication in surgical patients, and more frequently present in medical patients than was formerly thought
2. Aortitis
3. Dissecting aneurysm of the aorta
4. Diaphragmatic hernia
5. Pericarditis
6. Cardiospasm
7. Muscle pains in the chest
8. The "heart-ache" that may be present in neurotic individuals as well as in those with large hearts from organic disease
9. And other conditions which may even be below the diaphram, such as acute gall bladder disease.

Time does not permit a detailed discussion of each of these conditions, but the points I want to make are that the pain of angina pectoris is (1) typically beneath the sternum, with or without radiation to one or both arms; (2) is almost invariably related to exercise, excitement, or meals (particularly heavy meals); and, (3) subsides with cessation of activity or following the use of nitroglycerin beneath the tongue. Any substernal pain which persists for thirty minutes or longer and is attended by signs of shock had better be regarded as being due to coronary occlusion until proved otherwise. Clinically, the pain of coronary occlusion usually begins with mild intensity, gradually building up to great severity over a period of several minutes or longer, which may sometimes distinguish it from the pain of pulmonary embolism or dissecting aortic aneurysm in which the pain strikes, as has been described by one patient, "like the blow of a sledge hammer" with immediate agonizing suddenness. Although well-

marked coronary thrombosis is more likely than not to be attended by severe pain, there are exceptions —without any pain at all; in such cases there may be dyspnea instead or simply collapse or prostration. One further highly significant point in the diagnosis of angina pectoris or coronary occlusion concerns the sex of the patient. It is a clinical aphorism that "female patients under the age of 50 *rarely* have coronary disease in the absence of hypertension." Therefore, in any woman under the age of 50 whose presenting complaint is substernal pain, one can be reasonably sure it is *not* angina pectoris or due to coronary disease if the blood pressure is normal.

PULMONARY HEART DISEASE

Not long ago I saw a man, aged 54, who had been laid up for several weeks because of thrombophlebitis of some greatly dilated varicosities of the right leg. His local physician had treated him with penicillin intramuscularly and hot applications locally with good results, and most of the pain, tenderness, and local heat had subsided in his leg. Then one evening while his doctor was present, he flexed and then extended his leg to demonstrate that it felt better. Almost immediately he was taken with rather severe substernal pain attended by shortness of breath, sweating, pallor, rapid pulse and later some pain in the left lower chest. The substernal pain subsided in a few minutes, and his color improved, but the rapid pulse continued. The electrocardiogram showed no remarkable abnormality, but, because of the brief time that had elapsed since the onset of the pain, this finding could not be relied upon to rule out coronary occlusion. It seemed more likely that a small part of the clot had been dislodged from the thrombophlebotic area following the flexion and extension of his leg and had lodged in his pulmonary circulation. He was immediately hospitalized and the long saphenous vein tied off without further developments. A chest film on the day after admission showed evidence of pulmonary infarction in the left lower lung field. Experience has shown that we might well have gone a step further and tied off the superficial femoral vein to take care of any possible extension of the process from the superficial to the deep veins.

This case emphasizes the potential danger of peripheral vascular disease as a source of pulmonary vascular accidents which may prove fatal when emboli are of sufficient size to obstruct one of the major pulmonary vessels. Fortunately for this patient, the embolus was small, but there was no assurance that larger, more serious ones might not have broken loose unless vein ligation was accomplished. When larger elements of the pulmonary vascular tree are the site of embolism, the sudden burden that is placed on the right ventricle may cause it to dilate acutely and fail. This condition, the classical description of which was made by McGinn and White[4] some ten years ago, is called *acute cor pulmonale* and is characterized by definite physical and electrocardiographic findings. Theoretically, some degree of acute cor pulmonale exists with any pulmonary embolus, but the severity of symptoms and the gravity of the prognosis are in direct proportion to the size of the embolus, other things being equal. Many sudden, tragic deaths from pulmonary embolism are now preventable, and we must be alert to this possibility in both surgical and medical patients who experience sudden, repeated bouts of unexplained chest pain, particularly when thrombophlebitis or phlebothrombosis is known to be present. Moreover, we should be mindful of pulmonary embolism at all times in the differential diagnosis of chest pain even in the absence of signs of peripheral vascular disease.

The management of thrombophlebitis and phlebothrombosis is the subject of some controversy, the pros and cons of which would carry me too far afield. There are strong advocates of wholesale vein ligation; others prefer lumbar sympathectomy, and yet another group use the anticoagulant preparations, such as dicumarol and heparin. Each have their good points and bad and their particular indications. When controversies exist in such matters, it is perhaps wisest to be conservative when possible, use the method in which you are most skilled, and await developments in the field.

RHEUMATIC HEART DISEASE

A young woman in her early 30's consulted me recently complaining of severe palpitation and increasing dyspnea on effort. She was married and had three young children, and the pressure of her responsibilities at home was great. She tired easily and could not sleep at night because of distressing palpitation. She had never been told that there was anything wrong with her heart during any of her pregnancies nor given any advice concerning the wisdom of further childbearing. She denied having had rheumatic infection but did give a his-

tory of "growing pains" during childhood. Physical examination revealed a thin, but fairly well-developed young woman who did not appear acutely ill. Her heart was definitely enlarged downward and to the left with a forceful apex impulse that was visible and palpable. Along the left sternal border, maximal in the 4th interspace, there could be heard an early, high-pitched diastolic murmer of grade III to IV intensity. The pulse rate was 85, the rhythm dominantly regular but interrupted by frequent premature beats, and the pulse at the wrist was Corrigan in character. The blood pressure measured 140/60, a rather high pulse pressure. Physical findings were otherwise not remarkable. The serology of the blood was negative.

In the absence of syphilis, these findings are altogether typical of rheumatic heart disease with aortic regurgitation, well-marked cardiac enlargement, a definite impairment of myocardial reserve and frequent premature beats which by electrocardiogram proved to be ventricular in origin.

It seems almost incredible that a person with such definite heart disease could go through three pregnancies with hospitalization for delivery each time and have it go undiscovered—yet such things do happen, sometimes with tragic endings. Unless this young woman's circumstances permit her to lead a very careful life, she will be dead within five years or less, and we will be to blame for not having discovered a potentially fatal heart lesion before allowing her to add the burden of three pregnancies to an already damaged heart.

The two most important and significant heart murmurs that occur in rheumatic heart disease are (1) that of aortic regurgitation, present in the case just discussed, and (2) the murmur of mitral stenosis. Both are diastolic in time, but the murmur of aortic regurgitation is early in diastole, high-pitched in character, best heard with the diaphragm type of stethoscope, along the left sternal border, while the murmur of mitral stenosis is late in diastole, low-pitched or rumbling in character, and is best heard with the bell stethoscope at the apex region of the heart. Both murmurs are very characteristic and, once you are sure of their nature, they can be recognized as easily as the bark of a dog. It is impossible to go further in helping one to recognize these murmurs. The only way to develop skill and confidence is to listen to them whenever the opportunity presents itself.

Other Etiologic Types of Heart Disease

The foregoing etiological types of heart disease are commonly encountered in practice and, along with luetic heart disease, make up the majority of cases.

Congenital heart disease is less commonly encountered, but is worthy of mention, not only because of the great advances that have been made in the earlier recognition of the various developmental abnormalities, but even more so because of the brilliant work of Gross[5], Blalock[6] and others in the surgical treatment of patent ductus arteriosus, coarctation of the aorta, and a variety of other congenital abnormalities in which pulmonary stenosis is the dominant lesion. This work is outstanding and now affords additional means of reversing the ravages of heart disease which all too often we are unable to do.

It is rare now to encounter a patient whose cardiovascular disease is due to thyrotoxicity because of the general alertness of the profession to the manifestations of hyperthyroidism and the relatively early subtotal thyroidectomy which forestalls the cardiovascular complications of the disease.

Likewise, because of the therapeutic means at our disposal, it is unusual any longer to encounter the myxedema heart. Other less common conditions which may implicate the cardiovascular system include anemia, bacterial infection, neoplasm, thoracic deformities, toxic agents and trauma.

Cardiac Neurosis (Psychoneurosis)

In recent years, with the increasing incidence of heart disease and the widespread publicity about it, the problem of cardiac neurosis has assumed a place of great importance in medical practice. Almost daily we are confronted with cases that must be carefully studied and treated with this condition in mind, and, not infrequently, anxious members of a family may be as difficult to manage as the patient himself.

Cardiac neurosis (or psychoneurosis) in which there is actual fear or anxiety about the heart should not be confused with the equally common condition known as neurocirculatory asthenia, although quite often the two occur together and eventually the latter may cause concern about the heart in the patient, his family or his physician. Any neurotic or psychoneurotic state may have cardiovascular symptoms associated with it or be in part or completely based on the belief of the presence of heart disease even

with no symptoms whatever. In neurocirculatory asthenia, such symptoms as palpitation, precordial pain, dyspnea of the sighing type, faintness, dizziness, tremor, sweating and nervousness may be present to a marked degree without any particular apprehension about the heart. However, almost without exception, an anxiety neurosis of some sort is present in such patients and, without proper guidance and psychotherapy, a cardiac neurosis may develop in the course of time.

Underlying every cardiac neurosis there is, as a rule, some definite exciting factor, The occurrence of heart disease, especially sudden heart death among relatives or friends or even simply reported in the newspapers under dramatic headlines, may initiate a cardiac neurosis in one who is ready for a neurosis of some sort. The finding by a physician of a heart murmur, trivial or not, of some disturbance of rhythm which may be insignificant, of hypertension great or slight, or of actual heart disease, may be the exciting spark. Undue emphasis on some detail or actual misinterpretation of X-rays or electrocardiograms may provide the stimulus in the patient's mind. Subjective sensations may be the starting point, such as a disagreeable premature beat, a paroxysm of tachycardia, or the numerous symptoms of neurocirculatory asthenia. Likewise, various pains in the chest of cardiac or non-cardiac origin may create fear of heart disease and, therefore, in the minds of most laymen fear of sudden death. It is important to recognize and treat these cases early, for a long established cardiac neurosis, particularly when complicating serious heart disease, may be almost incurable.

Some years ago I saw a young man, 32 years old, who was overweight and had been overworking and smoking heavily. His father had angina pectoris. About four months before I saw him he first began to be bothered by a little dyspnea in the form of air hunger with s i g h i n g respiration, occurring at most any time but mostly when very tired from overwork. One month later while in a barber's chair having a haircut, he was seized by a sense of suffocation and after the haircut he had to rush outdoors for air. He then consulted a doctor who found him breathing deeply and rapidly. He was put to bed where he remained for four weeks with much sighing respiration at first and then gradual recovery. He was then seen by a local specialist who made a diagnosis of "soldier's heart" after obtaining a normal electrocardiogram. But because of the persistence of some sighing respiration, he went to a distant clinic for study. An electrocardiogram taken there was said not to be wholly normal, and he returned home with the impression that he was a probable "heart case." Following that he was in a state of nervous apprehension, the sighing continued, and a new symptom consisting of a little heartache was present for four weeks.

Except for apparent nervousness and obesity, physical examination was quite normal. The heart was normal in size, shape and sounds. There were no murmurs. The pulse was regular at a rate of 84. The blood pressure measured 140 systolic and 85 diastolic. A subsequent electrocardiogram was normal.

Here we have an example of a case of marked cardiac neurosis set off by a fear both by himself and others that his sighing meant heart disease. Unfortunately, while he was convalescing from this state of mind and body, his apprehension was stimulated again by overemphasis of some trivial variation of his electrocardiogram from the usual average normal. There was no evidence of real heart disease.

This sort of thing is going on about us all the time. The circumstances may vary but essentially the mechanism is the same, namely, fear and anxiety about cardiac invalidism and sudden death. These people need careful attention, tempered by judicious sympathy and an optimistic attitude toward the future, and much can be accomplished in giving hope, encouragement and a new lease on life to persons who might otherwise be almost totally incapacitated by ailments which have no organic basis. And, in accomplishing this mission, we cannot be very reassuring to a patient who is worried and apprehensive about his heart if he is asked to return for office visits too frequently. Of course, some patients need a great deal of reassurance, but it has never seemed very consistent to me to tell a patient that he has nothing to worry about and then have him return for weekly office visits. If careful examination gives reasonable assurance that no significant heart trouble is present, one can be much more reassuring by asking the patient to return in six months or a year. Then, if you have acquired his confidence and have been convincing in your statements to him, he cannot help but feel optimistic toward the future.

SUMMARY

By means of case presentations the value of the everyday use of some sort of classification in cardiac diagnosis has been emphasized. Although some differences of opinion naturally exist concerning the details, the present edition of the "Nomenclature and Criteria for Diagnosis of Diseases of the Heart"[3] published by the American Heart Association is widely used and is as inclusive as one might need for practical purposes.

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Pneumonia Following Chest Injury Preventable.

Pneumonia, following injury to the chest, can be prevented with large doses of penicillin or sulfadiazine, according to Edward Phillips, M.D., of Oakland, Calif.

Writing in the January 18 issue of *The Journal of the American Medical Association,* Dr. Phillips presents his observations on 73 patients treated at Permanente Foundation Hospital for pneumonia following injury to the chest.

Of these 73 patients, 43 had fractured ribs, one had a fractured shoulder blade and one had a fractured breast bone.

The author cites two investigators who demonstrated by animal experimentation how a blow to the chest, with or without fracture of the ribs, can produce injury to the lungs. The blow stimulates the vagus nerve, which extends from the cranium to the lungs, to contract the bronchial tubes which results in a partial collapse of the lung. This collapse area becomes infected because it lacks aeration.

Injections of atropine into the veins, which paralyzes the terminal fibers of the vagus nerve, will prevent or minimize the chances of collapse and infection following injury to the chest, states the author. Large doses of penicillin and sulfadiazine will sterilize the lung area.

Additional facts regarding the 73 patients follow:

—In 54 patients (74 per cent) pneumonia developed only on the same side as the injury.

—The majority of patients had a mild type of pneumonia.

—Over 92 per cent of pneumonia cases occurred within six days of the injury.

—Over 50 per cent of the patients recovered within one week.

—Three patients died with a resultant mortality rate of 4.1 per cent.

Twenty-six consecutive patients with severe chest and lung injuries who were treated with large doses of either penicillin or sulfadiazine did not contract pneumonia or other complicating infections.

RUTIN IN THE TREATMENT OF INCREASED CAPILLARY FRAGILITY: A PRELIMINARY REPORT*

H. S. ZFASS, M.D.,
Richmond, Virginia.

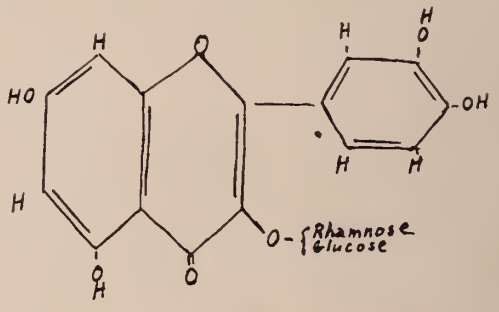
In 1936, and again in 1938 and 1940, Paterson,[1] Wartman,[2] Winternitz *et al.*,[3] reported the association of capillary rupture with intimal hemorrhage in the causation of cerebral and coronary vascular lesions. In 1940, Paterson[4] stated: "Capillary rupture with intimal hemorrhage is intimately concerned with the mechanism of cerebral arterial thrombosis and possibly, in certain cases, with the causation of cerebral arteriospasm and rupture. It is suggested that the factors responsible for the rupture of intimal capillaries in the cerebral arteries are high intracapillary pressure from hypertension, progressive atheromatous degeneration of the supporting tissue and increased capillary fragility from a variety of causes." Griffith and Lindauer[5,8], therefore, thought it possible that certain of the vascular accidents which sometime occur in cases of hypertension might be produced by an abnormal condition of the capillaries and in those patients with increased capillary fragility it was noted that crude hesperidin, a flavone glucoside, given orally restored the fragility to normal. Prior to this, Szent-Gyorgyi and others[6] reported that Citrin, or "Vitamin P" (a mixture of flavone derivatives including among other substances hesperidin, eriodictin and quercitrin plus ascorbic acid), had a tendency to regulate capillary permeability.

MATERIAL

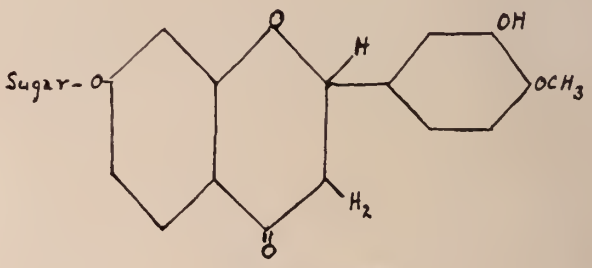
Rutin is a flavonol glucoside and has been reported to be a constituent of thirty-three species of plants, including buckwheat, forsythia, tobacco, garden rue, violets and elder flowers. Suspecting that the active constituent of crude hesperidin is of a flavonol nature, Griffith, Couch, and Lindauer first applied rutin clinically in 1942. The drug has been studied chemically by Couch and his co-workers.[7] Neither acute nor chronic toxicity to laboratory animals have been observed. The chemical formula of rutin is $C_{27}H_{30}O_{16}3H_2O$ and structurally, it is related to hesperidin (Fig. 1).

Rutin is a tasteless yellow powder consisting of needle-shaped crystals melting at 185° to 192° C. and decomposing at 214-215°. It is quite stable but gradually darkens on exposure to light. It is slightly soluble in cold water, more soluble in boiling water, alcohol, and acetone, and very soluble in alkaline solution. It is insoluble in ether, benzene, and chloroform. On hydrolysis with dilute acids it yields quercetrin, glucose, and rhamnose.

Fig. 1



RUTIN
(C_{27} H_{30} O_{16})



HESPERIDIN

The rutin used in this study was prepared by the Eastern Regional Research Laboratory of the U. S. Department of Agriculture. Flue-cured tobacco originally, and later fresh buckwheat plants, were used as the sources of rutin. It was extracted by alcohol percolation. Rutin was preferred to crude hesperidin since it is a pure substance amenable to accurate dosage and can be given in smaller doses, 20 mg. as against 500 mg. for the crude hesperidin.

METHOD

Capillary fragility as evidenced by the Petechial Index was determined by Griffith and Lindauer's modification of Göthlin's method.[5]

*Read before the Scientific Meeting, McGuire Clinic, Richmond, Virginia, October 1, 1946.

"Technique of the Test: (1) Mark off a circular area, 6 cm. in diameter, in each antecubital area. Mark off all blemishes and marks in this area that might later be confused with petechiae. (2) Place a standard blood pressure cuff about each arm, and maintain in each a pressure of 35 mm. of mercury for fifteen minutes. Lower the pressure, and count and mark all petechiae within the two circular areas, using a good light and a magnifying lens of 5D or its equivalent. (3) One hour or more later, repeat, using a cuff pressure of 50 mm. of mercury."

The Petechial Index is calculated as follows: "To the number of petechiae occurring at 35 mm. of mercury multiplied by 2, add the additional number occurring at 50 millimeters. Based upon the Petechial Index, capillary fragility is considered to be: (a) normal, if the Index is 8 or less, (b) increased (abnormal) if the Index is 13 or more, and (c) borderline, but probably abnormal, if the Index is 9 to 12. In order to save time, the second stage can be omitted under the following conditions: (1) The number of petechiae after the first stage is 2 or less. Such persons may be considered normal. Usually, but not invariably, the person is normal who has 3 petechiae after the first stage. (2) If 6 or more petechiae appear after the first stage, the subject may be considered abnormal. (3) The test is a repetition, and may be compared with the corresponding first stage of an earlier test. Repetition in less than three weeks, however, is unreliable in any case. The second stage should always be done if the fragility is being tested in a subject for the first time and there are four or five petechiae after the first stage. It should also be done in most cases when the number after the first stage is three."

The thirteen patients in this series were selected from a total of sixty over a period from five to sixteen months, each of which had, in addition to complete medical, neurological, and laboratory examinations, a determination of the capillary fragility as evidenced by the aforementioned method. Only those patients that showed an increased or borderline capillary fragility were chosen for actual rutin therapy.

DOSAGE

The usual dosage was 20 mg., orally, t.i.d. Refractory cases may require 40-60 mg. t.i.d. to restore capillary fragility to normal.

RESULTS

Of the thirteen patients in this series (see tabulated chart) eight were marked hypertensives. Each of these patients showed increased capillary fragility, the indices ranging from twelve to twenty-two. Repeat determinations of the capillary fragility were made approximately every fourth week following the initial rutin therapy. Using a dosage of 20 mg. t.i.d., three patients showed a normal petechial index at the end of four weeks, one at the end of eight weeks, and another at the end of twelve weeks. Of the three remaining patients in this group the dosage of rutin was increased to 40 mg. t.i.d., with a resulting reversion in one case of the Petechial Index to normal at the end of sixteen weeks. Capillary fragility was not effected by treatment and remained abnormal in the other two in spite of respective rutin dosages of 180 mg. daily. Curiously enough, one of the latter two patients had an initial doubtful or bordering Petechial Index that became more definitely positive following treatment; this patient eventually made a lethal exodus as the result of renal insufficiency. Of the above six patients whose fragility returned to normal, all remained so with the continuance of the drug. In one instance rutin was deliberately discontinued on one of the above patients whose capillary fragility, as measured by Göthlin's test, had become normal and there was a reversion to a positive index. The drug was administered again and the fragility returned to normal. There was an insignificant fall in blood pressure in three of the above group; five were uninfluenced. Four patients evidenced retinal hemorrhages of minor degree; three hemorrhages subsided, and one persisted but did not become greater under rutin therapy. Prior to the institution of rutin therapy one patient complained of dizziness; another, of dizziness accompanied with headache. The symptoms became more intense with administration of the drug but could not definitely be attributed to rutin.

Because of the wide usage of thiocyanate medication in hypertensives and the tendency of this drug to produce cutaneous ecchymoses and retinal hemorrhages,[5] three of the group whose Göthlin Index had returned to a normal level were given potassium thiocyanate together with the rutin and the capillary fragility remained normal. Two patients from a sub-group with hypertensive arteriosclerotic heart disease and showing an initial normal capillary fragility were given no other medication except potassium thiocyanate and eventually one evidenced

FIG. 2

DISEASE	PETECHIAL INDEX					BLOOD PRESSURE		RETINAL HEMORRHAGE		Evidence of Toxicity	Evidence of Sensitivity	Rutin Dosage	Thiocyanate Medication
	Normal at Onset	Positive at Onset	Unchanged	Return to Normal	Number Weeks	Fall	Unchanged	Persisted	Subsided				
Arterial Hypertension													
Case No. 1		x		x	4		x			None	None	20 mg. t.i.d.	x
Case No. 2		x		x	4	x			x	Dizziness (?)	"	20 mg. t.i.d.	
Case No. 3		x		x	12		x			None	"	20 mg. t.i.d.	x
Case No. 4		x	x	x	16	x		x		Dizziness Headache (?)	"	40 mg. t.i.d.	
Case No. 5		x		x	4		x		x	None	"	20 mg. t.i.d.	x
Case No. 6		x	x				x			None	"	60 mg. t.i.d.	
Case No. 7		x		x	8		x			None	"	20 mg. t.i.d.	
Case No. 8		Doubtful	x			x			x	None	"	60 mg. t.i.d.	
Hypertensive Arteriosclerotic Heart Disease													
Case No. 9	x*						x			None	"	20 mg. t.i.d.	x
Case No. 10	x					x				None	"	20 mg. t.i.d.	x
Recurrent Cerebral Arteriospasm													
Case No. 11		x		x	4		x			None	"	20 mg. t.i.d. Ascorb. Ac	
Secondary Anemia (Undetermined) Case No. 12		x		x	4		x			None	"	20 mg. t.i.d.	
Esophageal Hem. (?) Case No. 13		x		x	4		x			None	"	20 mg. t.i.d.	

*Became positive with thiocyanate therapy; returned to normal with rutin therapy.

an increased capillary fragility and soreness of several finger tips. The fragility became normal with the addition of rutin to the regimen and the finger discomfort disappeared. The other patient was given potassium thiocyanate for four months without disturbing the normal capillary fragility.

One patient with recurrent cerebral arteriospasm has, to date, shown promising results with rutin therapy.

CASE REPORTS

E. A., a sixty-eight year old white widow, was in general good health until June, 1945, at which time she "had a convulsion and became unconscious". Her LMD held very little hopes for her recovery. She was seen in consultation shortly afterwards because of a grossly irregular cardiac rhythm and bradycardia. Electrocardiographic evidence revealed a complete heart block, idioventricular rhythm and recent progressive myocardial degeneration. The auricular rate per minute was fifty; ventricular, forty-two per minute. Her course was uneventful and she did well until November 28, 1945, when she was admitted to the hospital because of a "convulsion". The outstanding physical findings on admission revealed the patient to have a generalized convulsion, worse on the left, with muscular weakness of the left face, arm, and leg. A diagnosis of cerebral embolus (rt.) was made at this time. Auricullar fibrillation was present and patient was digitalized. She was discharged via ambulance on December 5, 1945, seven days later, and patient was seen at her home shortly afterward at which time a physical examination revealed a fairly well developed and nourished female in no apparent distress and not acutely ill. Routine blood work was reported within normal limits. Ophthalmoscopic examination revealed normal retinal vessels and disks. With the exception of atelectatic rales in both bases the lungs were normal throughout. The apex beat was visualized slightly outside the left midclavicular line and there was cardiac dullness 1½ to 2 cm. to the left of the left midclavicular line. The rhythm was irregular; the rate was 45 per minute at the apex. The first and second sounds were of fair quality and a soft blowing systolic murmur was audible at the apex. B.P. 145/90. A neurological examination was essentially negative. Other physical findings were non-contributory. The evanescence of the hemiplegia following so shortly in the wake of the convulsion made one question the diagnosis of a cerebral embolus and favor one of cerebral arteriospasm. Because of the bradycardia one wondered if an underlying Stokes-Adams syndrome could not be the cause of the "convulsion". These thoughts were dispelled two months later (February, 1946) when patient complained of nausea, thickness of speech, and twitching of face. She was seen immediately and it was obvious that a convulsion was imminent. There were initial oscillations of the eyes, twitching of the left side of face, left arm and leg and soon a Jacksonian type convulsion. Right cerebral pathology was obvious. Examination of the heart revealed the first and second tones to be of fair quality. It was interesting to note that the rhythm was observed for the first time, to be perfectly regular; the rate was 80 per minute at the apex. This certainly did not look like a Stokes-Adams syndrome. Within forty-five minutes of the onset, the convulsions became generalized and so severe as to shake the bed. In spite of adequate sedation the convulsions and loss of consciousness lasted eight hours at the end of which time there was a typical left hemiplegia and dysarthria. A neurological examination revealed diminished reflexes on the left but no sensory disturbances. Within seventy-two hours there was little if any residual paralysis and the speech was perfectly normal. Patient made an uneventful recovery, but physical examination revealed that the cardiac rhythm had again become irregular and the rate was 40-45 per minute at the apex. One month later she experienced another episode with an identical course and convalescence. Intramuscular injection of 7½ gr. sodium amytal controlled the convulsions.

Because of the increasing frequency and severity of these attacks and because the underlying pathology possibly could be explained on the basis of cerebral arteriospasm or capillary rupture with intimal hemorrhage, capillary fragility (Göthlin's method) was determined with a resultant abnormal Petechial Index of twenty. On April 1, 1946, rutin 20 mg. t.i.d. was instituted and four weeks later there was a reversion of the capillary fragility to normal. There was some question as to an existing vitamin C deficiency and so ascorbic acid 100 mg. b.i.d. was administered in conjunction with the rutin.* Routine determinations for the following four

*It has been reported that the effectiveness of rutin is diminished in the presence of vitamin C deficiency.[7]

months found the fragility normal and patient asymptomatic. One week before she was to have had her fifth fragility determination patient was said to have had a "mild" convulsive seizure. Patient was not observed until the following day, during which time she evidenced only slight residual paralysis of the left arm. Capillary fragility was determined at this time and found to be increased. Patient admitted that she had "run out" of rutin two weeks prior to the episode and failed to renew her supply. Administration of the drug was begun immediately and three weeks later the fragility was again normal. There have been no subsequent attacks.

Shanno[9] reported two cases of pulmonary hemorrhages of undetermined origin that responded to rutin therapy. In both instances the hemorrhages ceased and previously positive Göthlin Indices returned to normal. We were confronted with a problem of bleeding of undetermined origin from the upper alimentary tract (Case No. 13) that appeared to respond to the drug rutin.

Case Abstract

P. C., a white housewife, aged eighteen, complained of "vomiting" of small amounts of bright red blood, especially at time of periods (but not consistently) for a period of two years. Her last menstrual period occurred six weeks prior to her admission and patient was referred by her obstetrician, who believed correctly that she was pregnant, because of peculiar vicarious-like bleedings from the throat. She gave a history of having been kicked in the abdomen at the age of twelve years and of a gnawing epigastric pain (relieved by food) for a period of five years. The physical examination was non-contributory with the exception of suggestive epigastric tenderness on palpation. Laboratory studies included a red blood cell count of 3,600,000 per cu. m.m. with 72 per cent hemoglobin; white blood count and differential were normal, as well as the bleeding and clotting times. Laryngoscopic, fluoroscopic and x-ray examinations of esophagus, stomach and duodenum did not reveal any evidences of pathology. The lungs were clear. A P. I. (Petechial Index) of seventeen returned to normal within four weeks under rutin therapy and there have been no recurrences of the above episodes.

It is not at all unlikely that rutin may prove to be of value in the treatment of certain of the secondary anemias of undetermined origin.

The following case is one dealing with an anemia of undetermined origin observed early in pregnancy (six weeks) and complicated by a pot-pourri of signs and symptoms. It is presented with tongue in cheek for the efficacy of rutin in this particular instance is open to question in spite of the evidence of increased capillary fragility and the dramatic response to normal with rutin therapy.

Case Report

E. D., an eighteen year old white married woman, gave as her chief complaint sharp pain in the left lower quadrant, of twenty-four hours duration. She gave a history of regular menses until the present, at which time there was an amenorrhea of six weeks duration. She stated that she had been in previous good health. Physical examination revealed a markedly anemic but well developed female lying restlessly in bed. She was obvicusly acutely ill. Temperature was 103°; pulse 110; respiration 26. There was only a suggestive stiffness of the neck and other neurological findings were not pathological. The lungs were clear, the heart normal in size but a transient soft systolic murmur was audible at the apex. Blood pressure 130/80. Most of the attention was centered at the left lower quadrant where there was moderate tenderness but no rigidity on palpation; the left flank was acutely tender on palpation and patient gave a history of having had previous renal pathology. No recent G.U. history was elicited. Sulfadiazine was ineffectual after twenty-four hours in influencing the course of her temperature and the picture was so suggestive of an ectopic pregnancy, in spite of the apparent generalized systemic infection, that an obstetrician was asked to see her in consultation. A blood work-up at this time revealed the hemoglobin to be 37 per cent; R.B.C. 4,410,000 per cu. m.m.; leukocytes 30,500 per cu. m.m.; PMN 90 per cent; lymphocytes 10 per cent. We decided to observe patient carefully. She was seen six hours later and because of such neurological manifestations as severe headache, suggestive stiff neck and fever of 104° she was admitted to St. Luke's Hospital. Fortunately, we located penicillin and adequate I.M. injections were begun immediately. Twelve hours later the blood examinations were repeated and the hemoglobin was reported as 36 per cent; R.B.C.

3,340,000; color index .54; leukocytes 10,300 per cu. m.m.; PMN 84 per cent; lymphocytes 14 per cent; large mononuclears 1 per cent; mast cells 1 per cent. Coagulation time was three minutes; bleeding time less than one minute. In regard to blood cell fragility, initial hemolysis began at .42 per cent. The heterophile antibody agglutination test showed agglutination in dilution 1:32. A voided urine specimen was reported to contain a distinct trace of albumen and fifteen to twenty pus cells per h.p.f. A spinal puncture was made without difficulty and the fluid was not under increased pressure. 248 red cells and one white cell were present per cu. m.m.; protein 25 mg.; sugar 60 mg. and chlorides 643 mg. per 100 c.c. A neurological examination at this time was non-contributory. Because of the reduced R.B.C. and hemoglobin, and amenorrhea and pelvic findings suggestive of an ectopic pregnancy (left) patient was admitted to surgery. At operation the abdomen was entered through a left rectus incision and no blood was encountered. Exploration of the cavity showed the uterus to be anterior and enlarged to the size of a six weeks pregnancy. The liver and spleen were normal in size and appearance. Both ovaries were cystic but for fear of aborting the patient these were left alone. Patient was returned to her room in fair condition. All subsequent laboratory procedures were reported negative. This included a repeated spinal puncture on the first post-operative day, spinal, blood and stool cultures, agglutination, serology, and an intravenous pyelogram. X-ray examination of the chest revealed peculiar breast shadows but this was afterwards explained on the basis of the pregnancy. The temperature returned to normal on the fourth post-operative day and after several 500 c.c. whole blood cell transfusions (positive Rh determination) she made an uneventful recovery and was discharged fourteen days following admission. She was seen one week later at which time there was a definite fall in the hemoglobin content in spite of iron and liver therapy. The capillary fragility was determined by Göthlins method. This was increased as evidenced by a Petechial Index of sixteen. Rutin, 20 mg. t.i.d., was administered and one month later the fragility was normal and there was an improvement in the hemoglobin content of 10 per cent. Unfortunately, the patient was not seen again for a period of five months during which time she did not receive rutin medication. Capillary fragility and blood picture taken at this time were within normal limits. One wonders whether the anemia could not have been influenced in the proper direction by the initial rutin therapy.

Comment

Rutin is a non-toxic drug related to hesperidin both in its structural arrangement and its ability to restore increased capillary fragility to normal. We are cognizant of the handicaps in evaluating the drug at this time. First, the series is too small. Secondly, the importance and relationship of the role of hypertension with or without increased capillary fragility as the cause of vascular accidents has not been definitely established. Further, the method used in determining the Petechial Index is crude and leaves much to be desired. Finally, very recent observations on the relationship of increased capillary fragility and increased cutaneous lymphatic flow[10] may throw more light on the choice of patients and the efficacy of rutin therapy.

Summary

1. The results of a series of thirteen cases have been reported showing the effect of rutin, a comparatively new drug, in establishing normal capillary fragility.
2. Two cases have been discussed in which potassium thiocyanate was administered to patients showing normal capillary fragility with varying results. One patient developed an increased capillary fragility following continued dosage of the drug together with tenderness in several finger tips; rutin restored the fragility to normal and the finger discomfort disappeared. Another patient received thiocyanate indefinitely without increasing the fragility or causing untoward symptoms.
3. The use of thiocyanate in the treatment of hypertensive arteriosclerotic heart disease is not without danger once the patient shows evidence of increased capillary fragility. The continued use of the drug is apparently harmless in patients whose capillary fragility remains normal. Once the capillary fragility is returned to normal with rutin, thiocyanate may be used as an adjunct indefinitely without increasing the fragility.
4. By its ability to restore increased capillary fragility to normal, rutin may prove to be a valuable drug in such patients in preventing or in-

hibiting cerebral vascular accidents and insidious bleedings of undetermined origin.

5. Of ten hypertensive patients evidencing increased capillary fragility and receiving rutin therapy, the blood pressures of seven were unchanged; three insignificantly lowered.
6. The retinal hemorrhages of three out of four patients subsided following administration of rutin.
7. The drug does not appear to have any toxic effects in man.
8. Cases refractory to rutin are occasionally encountered, in which event the usual dosage of 20 mg. orally t.i.d. should be increased to 40-60 mg. t.i.d., at least in some instances, before an increased capillary fragility may be expected to return to normal.

CONCLUSION

We must emphasize that this is merely a preliminary report, but from our observations we are of the opinion that (1) rutin may prove to be a valuable drug in preventing cerebral vascular accidents, retinal hemorrhages, and insidious bleeding of undetermined origin in those patients evidencing increased capillary fragility and responding to the drug. (2) Thiocyanate and related drugs may be given together with rutin indefinitely and without danger once capillary fragility has returned to normal. (3) The effectiveness of rutin in lowering the blood pressure is questionable.

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Tumor of Retina is Hereditary.

Retinoblastoma, a tumor of the retina, the membrane of light perception in the eye, is hereditary, according to Harold F. Falls, M.D., of Ann Arbor, Mich.

Writing in the January 18 issue of *The Journal of the American Medical Association,* Dr. Falls points out that both eyes were affected with retinoblastoma in female identical twins. The condition appeared at approximately six months of age in both. Because the parents refused either surgery or x-ray treatment for the pair, a fairly rapid extension of the tumor within the skull led to the death of both children.

Dr. Falls states that "it is my sincere conviction that parents producing any child with retinoblastoma should be strongly urged to stop all child bearing. It is also advocated that any person surviving enucleation [removal of the eyeball] for retinoblastoma be sterilized."

NEUROSURGICAL COMPLICATIONS OF INJURIES ABOUT THE HEAD AND FACE*

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Complete accurate appraisal of a patient's condition suffering from traumatic wounds of any type about the head cannot be definitely determined until a neurological examination has been done. Many times the patient is unconscious or uncooperative for various reasons which delay the early completion of such an examination. However, several gross tests can be carried out which are of great help. When there is an injury about the head or face, associated with an abrasion, laceration or fracture of the ipsilateral shoulder, one should always examine the cervical spine carefully, because stretching of the head shoulder angle may cause fracture of the laminae or articular facets of the spine. Often oblique rays are necessary to demonstrate the fracture. Meredith and Grantham called attention to this syndrome and cautioned about the examination if the patient complained of any stiffness or pain in the neck. It is important to know the power of motion in all extremities, and, if there is weakness of an arm or leg, to note carefully if the weakness progresses. This is especially true if the patient is drowsy and there is suspicion of an intracranial localized blood clot. In the drowsy or unconscious patient, pinching the arm or leg or sticking it with a pin will often cause motion when such motion cannot be elicited otherwise. Again, in the unconscious patient observation of the exposed chest and abdomen will often show characteristic movements, thereby aiding in diagnosing fracture dislocation of the cervical spine with complete physiological or anatomical disruption of the spinal cord. Inspection shows absence of chest motion and jerky excursion movements of the abdominal wall. During inspiration the abdominal wall rises and on expiration it falls rapidly. In addition, there is a fluttering like motion of the anterior abdominal wall at the end of expiration, showing absence of any muscular tone. The picture is quite characteristic. When deep lacerations are present about the cheeks, having the patient show his teeth, or, if unconscious, painful pressure over the supra-orbital nerves will cause movement about the mouth, showing that the facial nerve in question is intact. If facial wounds require dressings which cover one or both eyes for several days, the condition of vision in each eye should be tested, preferably by reading, but otherwise by counting the examiner's fingers with each eye before the dressing is applied. When unconscious, a light is flashed into the eyes and, if the pupils contract, sight is most likely present.

Careful inspection of the nares and external auditory canals should be made for the presence of cerebrospinal fluid leak. Cerebrospinal rhinorrhea occurs following fracture through the accessory nasal sinuses in the floor of the anterior fossa, tearing the cerebral dura, and fluid escapes from the subarachnoid space. It is difficult to tell if fluid is escaping when the patient is lying down as the fluid runs down the posterior nasopharynx. The patient is held in the sitting position with the head bent forward, thus allowing the escape of fluid through the nose. Generally blood from facial wounds will be found partially clotted in the external canal and at first glance it is impossible to determine if subarachnoid fluid is escaping from the ear. The canal should be cleaned gently with a cotton applicator, and then by turning the suspected ear downward fluid will escape if such a lesion is present. Should a fracture of the mandible be present, always suspect a basilar skull fracture, or cerebrospinal fluid leak from the ear, and examine the status of hearing in both ears.

Doctors are constantly amazed by the alertness and good general condition of an average patient exhibiting large ragged wounds of the face or scalp, often with facial bones crushed or actually missing or a comminuted skull fracture with actual extrusion of pulpified cortical tissue. In the recent war the severity of the brain injury was not always appreciated when only a small laceration 5-10 millimeters was found on the scalp from a high velocity fragment. However, the patient would be unconscious and die in a very short time. If autopsied the brain showed many diffuse and conglomerate petechial hemorrhages, areas of frank hemorrhage

*Read before the Norfolk County Medical Society, Norfolk, Va., May 13, 1946.

and cortical destruction. Coleman has shown that only 5 to 7 per cent of head injuries show shock if the injury is limited to the head. Therefore, if shock is present, one should always examine the patient for associated injuries, notably fractures of long bones, intra-abdominal or intra-thoracic injuries.

Injuries involving the scalp, skull or brain may be divided into recent and delayed, when speaking in terms of the time element for surgical repair. The nature of wounds, regardless of etiology, requires the same basic principles of treatment. These are: Control of hemorrhage, prevention of infection, and restoration of the tissue to its functioning state if possible. Only too often does a severe injury involve comminution of the frontal or ethmoidal cells, or orbit and fracture into the cranial vault, tearing the dura and causing severe damage to the adjacent cerebral cortex. When such wounds exist, the treatment necessitates great skill to make the cranial repair and restore normal facial contour.

It is well to know that the cause of death from head injuries is, first, direct injury to the brain, with pressure or without pressure; second, infection from scalp wounds or compound fractures; third, intracranial clots which may be extradural, subdural or intracerebral. Also, the indications for operation in head injuries are, first, as previously stated, to prevent infection; second, to arrest and control hemorrhage; third, to elevate depressed fractures; and, fourth, to occasionally do a temporal decompression to control increased intracranial pressure.

The treatment of recent wounds of the scalp, those less than six hours old, consists of first shaving the hair from about the wound for at least three inches. The skin about the wound is painted with tincture of merthiolate or other suitable solutions, after which it is infiltrated with 1 or 2 per cent novocain one-half inch from the margins of the wound. This is followed by copious irrigation of the wound with normal saline or sterile water until the wound is thoroughly clean. Generally this requires three to six thousand cubic centimeters of water if the wound is dirty. Next, the edges are debrided until the cut surfaces ooze bright blood freely. If careful inspection and palpation of the skull shows no fracture, the wound is closed tightly in layers with interrupted black silk sutures. The practice of dusting sulfanilamide powder into wounds is discouraged since adequate debridement and control of hemorrhage before suturing the wound will result in primary union. Sulfa crystals have only very questionable bacteriostatic action when applied locally. If placed in the wound excepting as a very fine film, wound healing is delayed because of the hard, bulky mass of non-absorbable material remaining between the wound edges. Its local use was entirely stopped during the war.

Penetrating wounds with compound depressed fractures or through and through gunshot wounds of the brain often leave comminuted fragments of bone and small pieces of metal driven deeply into the cortex. In these instances it is necessary to elevate the bone fragments, remove all accessible in-driven bone and metal and thoroughly irrigate the tract of the missile. Often it is possible to insert a soft rubber catheter along the entire tract, and wash blood clots and destroyed brain tissue out. More vigorous efforts should be made to remove in-driven dirty bone fragments than relatively clean metal because brain abscesses are more prone to develop about pieces of bone.

Sulfathiazole powder should never be used on the surface of the brain as it is very toxic and irritating. Horrox relates two patients who had generalized convulsions shortly after the application of the drug while the wound was still open. If the ventricle has been entered, it is well to put 25 to 50 thousand units of penicillin directly in the cavity. Next, the dura should always be closed tightly to prevent infection. If the tear in the dura is too large to suture, a satisfactory patch can be taken from the exposed pericranium or temporal fascia. Again, the skin should be closed in layers without drainage. Penicillin is found in very low concentrations within the cerebrospinal fluid when given by the intramuscular route, but maintains an adequate level when injected either directly into the ventricular system or the lumbar subarachnoid space. However, smaller doses are given in the 24 hour period than by muscle, usually 25,000 units twice daily. This quantity may have to be reduced if the patient complains of neuritic pains into the legs or develops severe headache. These unfavorable symptoms are usually due to an irritable fixative rather than to toxicity of the yeast.

Recent war experiences definitely demonstrated that

many initially untreated compound depressed skull fractures and or with laceration of the cerebral cortex could be treated later like early wounds of similar nature with primary healing. This was because the wounds were adequately debrided, closed tightly and given penicillin both by intramuscular and intrathecal routes. I have operated on untreated or improperly treated cases in this fashion from 5 to 11 days after injury, with resulting primary healing.

Any repair of skull defects should be delayed for six weeks to three months. At the end of that time the defect may be repaired for cosmetic reasons or because the patient complains of a giddy feeling when stooping over. Contrary to popular opinion, repair of a skull defect will not cure epilepsy, which, of course, is due to brain damage. There are several ways of repairing a skull defect. Following the first world war, Colman reported on the use of antogenous grafts taken from the external table of the skull close to the defect. This was a long, tiring, bloody operative procedure and, if completed, the pieces of bone often absorbed in several months, leaving the original defect. Later, bone grafts were taken from the shin or ribs, and seemed more satisfactory. Celluloid plates, containing many perforations fitted to the defect may be moulded while warm between two pans, placed in the defect and sutured. The procedure is very simple, and satisfactory results are obtained equal to other methods. Vitallium, and especially tantalum, has been used since the war frequently to repair defects. Tantalum is easily cut and moulded at the operating table, and is probably the most inert of the metals when buried in tissues.

One of the most deceptive and grave complications of skull fracture is an extradural hemorrhage. This lesion occurs when the fracture line crosses the middle meningeal artery groove, tearing the artery, and a localized extradural hemorrhage results. The classical diagnostic picture is an injury to the head, followed by increasing drowsiness and unconsciousness several hours later, dilatation of the ipsilateral pupil and contralateral hemiparesis, slow pounding pulse, rise in blood pressure, and occasionally generalized convulsions. The treatment consists of trephining the skull, controlling the hemorrhage and removing the blood clot. The chances of the patient recovering are directly proportional to the time the clot is removed following injury. Extradural hemorrhage in the posterior fossa is rare but does occur and requires prompt removal when cerebellar symptoms develop. Acute subdural clots are generally fatal because a major vessel is usually torn at an inaccessible place on the inferior surface of the brain and it is impossible to clamp the bleeding points. Acute intracerebral clots may be located anywhere in the subcortical tissue and often a ventriculogram will be necessary for localization.

Delayed lesions of the central nervous system following trauma must always be kept in mind and proper treatment begun when any are suspected. Chronic subdural hemorrhage may give symptoms several weeks or months following even a very trivial injury. It is generally easily removed by placing a burr hole over the suspected clot and removing the liquefied, greenish brown fluid. Burr holes should always be made bilaterally, as about 25 per cent of the clots occur on both sides of the head. Pneumocephalus may appear rapidly or be delayed for several days following a fracture of the frontal, ethmoid or sphenoid sinus with tearing of the dura, which allows air to escape into the cranial cavity and become pocketed. These lesions are more frequent following gunshot wounds of the sinuses than from blows about the head which cause fracture. Surgical repair of the dura and aspiration of the air by utilizing an appropriate osteoplastic flap is the treatment of choice.

Gas gangrene of the head and face are fortunately very rare because of the good blood supply of these tissues. However, because of the close proximity to the central nervous system this infection approaches 100 percent mortality.

When infection of the scalp does occur, any wound should be opened widely and warm wet dressings applied every four hours. Enough sulfadiazine is given by mouth to keep the blood level at about 10 mg. per cent and 25,000 units of penicillin is given intramuscularly every three hours. An infected scalp, whether in the location or presence of a skull fracture is a very serious lesion. This is because there are many thrombosed infected veins in the infected laceration which can extend through the diploe of the skull, resulting in osteomyelitis of the skull, extradural abscess, subdural abscess, meningitis, or brain abscess. All of these lesions with the exception of meningitis and possibly subdural abscess require surgical intervention and all are

serious complications which may result fatally.

Cavernous sinus thrombosis occurs from infection about the upper portion of the face and is brought to the sinus by infection in the angular and smaller veins about the eyelids. This lesion is also quite characteristic, as shown by chemosis, proptosis, varied extra-ocular palsies, engorgement of the retinal veins and early papilledema, with evidence of facial infection. In spite of the use of the sulfonamide drugs, penicillin and general measures directed toward treating the infection, the mortality rate is still high.

Surgical attack on the cranial nerves following traumatic injury, with the exception of the facial nerve, is not only discouraging but generally useless. Occasionally a displaced fracture line of the floor of the anterior fossa compresses or partially severs the optic nerve by narrowing the optic foramen and edema of the nerve occurs which will destroy the remaining nerve fibers. If such a condition exists, the optic foramen may be decompressed through an osteoplastic flap. Contusions, lacerations and fractures of the face frequently destroy one or more of the three peripheral sensory branches of the trigeminal nerve that cause numbness of a portion of the face for several months. Excepting for the subjective uncomfortable feeling of numbness there are no ill effects of the lesion. The patient should be reassured that the feeling will return in a few months.

The anatomy of the facial nerve is such that a functional repair in the bony canal and close to the muscular innervations on the face is very difficult and many times impossible. Primary end to end suture of the nerve is the repair of choice. However, varied degrees of mass motion of the face and diminution of natural facial expression always results from the best facial repair if complete severance of the nerve has occurred. Nerve grafts are generally unsatisfactory. Facio-hypoglossal or facio-accessory anastomosis are often done when the nerve is destroyed close to or within the bony canal, making approximation impossible. Should enough time elapse following injury to the facial nerve so that fibrosis of the facial muscles has occurred, it then is necessary to use a mechanical method for restoring balance to the face. Brown has devised fascial slings placed in the subcutaneous tissue of the face from the lips to the temporal fascia and muscle that corrects this deformity satisfactorily. Needless to say, only slight motion and no facial expression can result from this procedure.

Finally, mention should be made of the general treatment of the patient with cerebral concussion or contusion. The head of the bed should be elevated 8 to 12 inches, which allows for better venous drainage from the head and also tends to reduce the intracranial arterial pressure. In this position, should the patient develop fluid in the lungs, as they often do if drowsy, lower the head of the bed, raise the foot sharply, turn the patient on his abdomen and his head to the side. Often several ounces of fluid will escape in a few minutes' time. The procedure is often life saving. Generally morphine should be avoided, but if the patient has severe associated injuries for which morphine is indicated and close observation of the patient is possible, appropriate doses may be given. Only about 3 to 5 per cent of these patients have intracranial hypertension of severe enough degree to restrict fluids, so an intake of 1,800 to 2,500 c.c. in twenty-four hours should be encouraged. Generally no dehydrating drug is given unless the patient becomes worse from intracranial pressure. Lumbar punctures are used for diagnosis of subarachnoid hemorrhage and occasionally for reducing pressure, but certainly it is not a procedure to be used on all patients with head injuries. Excepting when immediate operation is planned, the x-ray examination of the skull may be delayed until such time when the patient is cooperative, and will tolerate transportation to and manipulation of the head in the x-ray department.

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DIABETIC ACIDOSIS
A Review of 105 Cases*

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There is no standardized treatment of diabetic acidosis. Differences are found in reports of Joslin, *et al*,[1] Almy *et al*,[2] Peters,[3] and others. The chief points at issue are (1) the dosage of insulin, (2) the early use of glucose, and (3) the advisability of using alkalis, such as 1/6 molar sodium lactate solution intravenously. This report is based on a review of 105 cases of diabetic acidosis treated on the medical service of the University of Virginia Hospital from January 1, 1939, to September 1, 1945.

In this period under study, Table I, there were 71,965 admissions to this hospital. Diabetic acidosis was present in 105 (7.69 per cent) of 1,366 diabetic patients. A carbon dioxide combining power of the plasma of 35 volumes per cent and below has been chosen arbitrarily as the criterion for the diagnosis of diabetic acidosis. There were 8 deaths in these 105 patients. Thus, the crude mortality rate was 7.62 per cent. Three, or 2.76 per cent, were believed to be due to diabetic acidosis *per se*, and 5, or 4.86 per cent, occurred in cases with complications thought sufficient in themselves to cause death without the added factor of acidosis.

TABLE I
DIABETIC ACIDOSIS
January 1, 1939—September 1, 1945

Definition: CO_2 Combining Power—35 Vols. % and below		
1. Total hospital admissions		71,965
2. Total Diabetic admissions (including acidosis)		1,366
3. Percentage admissions for diabetes		1.89%
4. Total cases of acidosis		105
5. Deaths		8
6. Mortality Rate		7.62%
A. Uncomplicated cases	3	2.76%
B. Complicated cases	5	4.86%

SEVERE ACIDOSIS

A carbon dioxide combining power of the plasma of 20 vols. per cent or below has been regarded by many writers as indicative of more critical and severe acidosis. A graver prognosis is said to be associated with a state of unconsciousness or "coma" than with a condition of semi-consciousness or drowsiness. In this series, there were 64 cases of severe acidosis. Five of these (7.81 per cent) terminated fatally, as shown in Table II. Twenty-one (32.78 per cent) were admitted in coma and 3 of these (14.25 per cent) died. Forty-three (67.19 per cent) were semicomatose and 2 (4.65 per cent) died. Thus, the mortality rate in this severe acidosis group increased approximately three times when the patient was in coma.

TABLE II
SEVERE DIABETIC ACIDOSIS
CO_2 Combining Power 20 Vols. % and Below
64 Cases

1. Crude Mortality rate	5 deaths	7.81%
2. Condition on admission to hospital		
A. Comatose	21 cases	32.78%
B. Semicomatose	43 cases	67.19%
3. Mortality rate according to condition		
A. Comatose	3 deaths	14.25%
B. Semicomatose	2 deaths	4.65%

The cause of the 8 deaths, only 3 of which were believed to result primarily from diabetic acidosis, are analyzed in Table III. In 6 of these fatal cases,

TABLE III
FATAL CASES OF DIABETIC ACIDOSIS

Age	*Sex*	*Insulin Before Admission*	*Hours Duration of Coma*	*Initial CO_2 Vols. %*	*Complications*
43	Female	None—5 days	10	18.2	None
50	Male	None—4 days	30	23.1	None
15	Male	Yes (?)	6*	15	None
14	Female	None	24	12.7	Lobar pneumonia with effusion
78	Male	None	6	8.5	Coronary thrombosis
75	Female	?	12*	33.4	Generalized peritonitis
64	Female	None—2 days	18	24.1	Cerebrovascular accident
31	Female	None—2 days	24	13.8	Subarachnoid hemorrhage

*Semicomatose

*From the Department of Internal Medicine, University of Virginia Hospital.

the patient had either never taken insulin or had discontinued insulin treatment. Five were over 40 years of age. Four were over 50 years of age and had an average age of 66.7 years. The average age in the 3 fatal cases due to acidosis alone was 36 years. The complications thought to be the cause of death in 5 cases were respectively: lobar pneumonia with pleural effusion, coronary thrombosis with myocardial infarction, generalized peritonitis, cerebrovascular accident, and subarachnoid hemorrhage.

PRECIPITATING CAUSES

Precipitating causes of diabetic acidosis, as shown in Table IV, conformed to those in previous reports.

TABLE IV

PRECIPITATING CAUSES OF DIABETIC ACIDOSIS

1. Failure to take insulin as instructed		34
2. No known cause:		
A. Undiagnosed diabetic	14	
B. Treated diabetic	12	
	—	26
3. Common cold		11
4. Dietary indiscretion		6
5. Furunculosis		6
6. Lobar pneumonia		5
7. Pulmonary tuberculosis		4
8. Cellulitis		2
9. Empyema		1
10. Purulent otitis media		1
11. Atypical pneumonia		1
12. Subarachnoid hemorrhage		1
13. Coronary thrombosis with infarction		1
14. Other causes		6
		105

Failure to take insulin as instructed was responsible in 34, about one-third, of the cases. No cause for acidosis could be found in 26 patients. There was no history of diabetes in 14, and 12 were being treated for diabetes when acidosis developed. The common cold was thought to be the precipitating factor in 11 cases. Miscellaneous causes included dietary indiscretions, furunculosis, cellulitis, lobar pneumonia, empyema, purulent otitis media, atypical pneumonia, subarachnoid hemorrhage, and coronary thrombosis with infarction.

A brief analysis of the 8 fatal cases is given below:

Case 1.—F. W., A 43-year old colored female admitted January 28, 1940, voluntarily discontinued her insulin for 5 days and gradually lapsed into coma 10 hours before admission. The urine sugar, acetone, and diacetic acid were 4 plus. The carbon dioxide combining power of the plasma was 18.4 vols. per cent, and the blood sugar was 454 mg./100 cc. The patient was given 4,000 cc. of intravenous normal saline and 140 units of regular insulin during the first 3 hours. Later, 1,400 cc. of 1/6 molar sodium lactate solution was given intravenously. Within 15 hours, the ketonuria had cleared and the carbon dioxide combining power of the plasma had risen to 43 vols. per cent. However, she remained unconscious and died several hours later. A total of 375 units of regular insulin was given. Death was believed to be due primarily to diabetic acidosis of long duration.

Case 2.—F. C., a 50-year old colored male admitted April 7, 1943, had had diabetes for 11 years but had never adhered to a diet or an insulin program. Four days before admission, he discontinued insulin. This was followed by epigastric pain and nausea with vomiting. Thirty hours before admission, he became unconscious. Tests for sugar and acetone in the urine were strongly positive. The carbon dioxide combining power of the plasma was 23.1 vols. per cent. The blood sugar was 421 mg./100 cc. Twelve hundred cc. of 1/6 molar sodium lactate solution, 3,500 cc of 5 per cent glucose in normal saline, and 1,500 cc. of normal saline were given intravenously. Two hundred units of regular insulin were given during the first 3 hours. In 8 hours, the urine acetone had been reduced to 1 plus and the carbon dioxide combining power of the plasma was 55 vols. per cent. In spite of this, he became anuric, remained unconscious, and died 2 hours later. A total of 360 units of regular insulin was given. Death was attributed to diabetic acidosis.

Case 3.—R. L., a 15-year old white male admitted July 12, 1944, had unregulated diabetes for many months but had not sought medical aid. He vomited for 1 day and became stuporous 4 hours before admission. Laboratory examinations showed a 4 plus sugar and 3 plus acetone in the urine, a blood sugar of 533 mg./100 cc., and a carbon dioxide combining power of the plasma of 15 vols. per cent. One hundred and seventy units of regular insulin, 1,500 cc. of normal saline, and 1,200 cc. of 1/6 molar sodium lactate solution were given during the first 3 hours. In 9 hours, the carbon dioxide combining power of the plasma had increased to 46.7 vols. per cent. However, he re-

mained stuporous and disoriented and became anuric 3 hours later. In 24 hours, although the acetone in the urine had been reduced to 1 plus, the patient developed peripheral vascular collapse and died. Death apparently resulted from prolonged acidosis.

Case 4.—R. E., a 14-year old white female admitted December 15, 1941, had had polyuria, polydipsia, and weight loss of 6 months' duration. She had marked nausea and vomiting for 3 days. She became unconscious about 24 hours before admission. Examination revealed lobar pneumonia with pleural effusion. The urine acetone was 3 plus and the sugar 4 plus. The blood sugar was 435 mg./100 cc. The carbon dioxide combining power of the plasma was 12.7 vols. per cent. Treatment consisted of 1,200 cc. of normal saline and 2,400 cc. of sodium lactate solution intravenously and 115 units of regular insulin during the first 3 hours. After 8 hours, 1,200 cc. of 5 per cent glucose was given intravenously. There was no ketonuria after 18 hours and the carbon dioxide combining power of the plasma had increased to 48.1 vols. per cent. Three hundred units of insulin were given during the first 24 hours. The acidosis did not recur but the patient became anuric. Death, which occurred 4 days later, was thought to be due to lobar pneumonia.

Case 5.—H. T., a 78-year old white female, was admitted June 20, 1943. She had been bedridden for 2 years with arthritis and was not a known diabetic. She had "felt bad" for 5 days and was found in coma 6 hours before admission. The urine sugar test was 4 plus and the acetone and diacetic acid tests were 1 plus. The carbon dioxide combining power of the plasma was 8.5 vols. per cent. The blood sugar was 400 mg./100 cc. Treatment consisted of 1,800 cc. of intravenous sodium lactate solution, 1,000 cc. 5 per cent glucose in normal saline, and 200 units of insulin during the first 3 hours. About 2 hours after admission, the patient responded slightly to questioning. Irregular cardiac rhythm and a pericardial friction rub were then noted for the first time. An hour later, the carbon dioxide combining power had increased to 36.7 vols. per cent. The patient died suddenly 4 hours after admission. The cause of death was thought to be coronary thrombosis with myocardial infarction.

Case 6.—M. T., a 75-year old diabetic colored female admitted January 11, 1945, had had severe acute abdominal pain, nausea, and vomiting for 5 days. She was semi-conscious on admission. The urine sugar was 4 plus but there was no acetone. The carbon dioxide combining power of the plasma was 33.4 vols. per cent. There was marked spasm and tenderness in the right side of the abdomen, believed to be due to a generalized peritonitis following the rupture of a viscus. She was given 80 units of regular insulin and 4,000 cc. of 5 per cent glucose in normal saline. Six hours later, the carbon dioxide combining power of the plasma was 52 vols. per cent and the blood sugar was 129 mgs. per cent. The patient died 21 hours after admission, presumably from peritoneal infection.

Case 7.—J. B., a 64-year old white female diabetic, was admitted February 3, 1943. She became comatose 18 hours before admission and was thought to have had a cerebrovascular accident. The urine sugar was 4 plus and the acetone was 2 plus. The carbon dioxide combining power of the plasma was 24.1 vols. per cent. The blood sugar was 434 mg./100 cc. Fifty units of insulin were given during the first 3 hours and 160 units during the first 24 hours. Fifteen hundred cc. of normal saline and 1,200 cc. of 1/6 molar sodium lactate solution were administered intravenously. In 24 hours, the ketonuria had cleared and the carbon dioxide combining power of the plasma had increased to 47.8 vols. per cent. The patient remained comatose and became anuric on the third day. The acidosis did not recur. Death, which occurred 4 days later, was thought to be due to the cerebrovascular accident.

Case 8.—M. W., a 31-year old colored female diabetic, admitted April 8, 1943, was found unconscious 24 hours before admission. Repeated spinal fluid studies were consistent with a subarachnoid hemorrhage. The urine sugar and acetone were 4 plus. The carbon dioxide combining power of the plasma was 13.8 vols. per cent. The blood sugar was 382 mg./100 cc. Two hundred and ten units of insulin were given during the first 3 hours, together with 1,200 cc. of sodium lactate solution and 5,500 cc. of 5 per cent glucose in normal saline intravenously. In 12 hours, the ketonuria had cleared. Several hours later, the carbon dioxide combining power of the plasma was 42.7 vols. per cent. In spite of adequate control of the diabetes, she remained comatose and died 4 days later. Subar-

achnoid hemorrhage was believed to be the cause of death.

Unfortunately, permission for post-mortem examination was refused in all of the cases.

TREATMENT

In this series of cases, treatment of *severe* cases of diabetic acidosis has conformed largely to the following program:

1. On admission, a urine specimen is obtained, the patient being catheterized if necessary, and tested at once for sugar, acetone, and diacetic acid. Blood samples are taken for sugar and plasma carbon dioxide combining power determinations. A laboratory technician is available for this work at all times.

2. Insulin.—Fifty units intravenously and 50 units subcutaneously (or more) of the quick-acting (regular) insulin are given initially and repeated in 50 unit doses at 30-45 minute intervals in an attempt to give about 300 units in the first 3 hours. Thereafter, insulin is given as indicated. These large doses of insulin are not advised as a routine procedure unless frequent urine sugar and blood sugar determinations are made. Otherwise, profound hypoglycemia may occur.

3. Fluids and Alkali.—An infusion of normal saline is started promptly and continued so as to supply 750-1,000 cc. of fluid per hour during the first 4-5 hours. During the first hour, 1/6 molar sodium lactate solution is given intravenously in 600 to 1,200 cc. amounts, usually the latter.

4. Urine specimens are obtained for testing every ½ hour if a catheter is in place or every hour if the patient is voiding.

5. The blood sugar and the carbon dioxide combining power determinations are repeated at the end of the first 3-5 hour period and again 6-8 hours later.

6. About 3-4 hours after treatment is started, glucose is given if there is indication of a decreasing urine or blood sugar. This may be by an infusion of 1,000 cc. of 5 per cent glucose in normal saline intravenously, *or* by sweetened water, orange juice, or milk, if the patient can take these fluids by mouth.

7. Cleansing enemas are not believed necessary nor do retention enemas seem beneficial.

8. The patient is allowed nothing by mouth if he is nauseated or unconscious. If the patient is not vomiting, gastric lavage is not indicated as this would serve only to remove a saline solution which the patient can use.

9. Small glucose feedings with supplementary insulin are given at frequent intervals (every 3-4 hours) until an adequate diabetic maintenance program is established.

10. Stimulants, blood transfusions, plasma, and other supportive measures are administered as needed.

DISCUSSION

Inasmuch as many of these patients came from a large, rural, mountainous area, it is probable that the cases of this condition observed on the medical service of the University of Virginia Hospital are in general more severe than those treated in large city hospitals. Frequently, the patient may be 12 or more transportation hours from the hospital at the time he becomes ill enough to seek hospital attention himself or his local doctor advises hospitalization.

The amount of quick-acting (regular) insulin used in the treatment of diabetic acidosis is arbitrary. However, there has been a trend toward the use of larger initial doses of insulin in recent years in our severe cases of acidosis. After January 1, 1944, an average of 255 units of insulin was given during the first 3 hours, which was approximately 100 units more than was used previously. This is shown in Table V. During this same time, the

TABLE V

SEVERE DIABETIC ACIDOSIS

CO_2 Combining Power 20 Vols.% and Below

1. Average amount insulin first 3 hours:		
A. (1-1-39 to 1-1-44)	45 cases	144 units
B. (1-1-44 to 9-1-45)	19 cases	255 units
2. Average amount insulin first 24 hours:		
A. (1-1-39 to 1-1-44)	45 cases	349 units
B. (1-1-44 to 9-1-45)	19 cases	450 units
3. Average fluid intake first 24 hours:		
A. (1-1-39 to 1-1-44)	45 cases	5976 cc.
B. (1-1-44 to 9-1-45)	19 cases	6881 cc.

average fluid intake was increased from 5,976 cc. to 6,881 cc., or about 900 cc. The largest amount of insulin given to any single case during the first 3 hours was 375 units and the largest amount in the first 24 hours was 830 units.

An alkali in the form of 1/6 molar sodium lactate solution has been used during the initial 3 hour period in approximately 2/3rds of our cases of *severe* acidosis. The remaining 1/3rd usually re-

ceived intravenous normal saline alone. The average carbon dioxide combining power on admission of the case in *severe* acidosis was 13.6 vols. per cent. The initial carbon dioxide combining power of the group of patients treated with sodium lactate was slightly lower (13.2 vols. per cent) than those in which an alkali was not used (15.6 vols. per cent). At the end of the first 12 hour period, the carbon dioxide combining power in those treated with sodium lactate was 47.7 vols. per cent, whereas in the group in which this form of treatment was not used, it was only 33.3 vols. per cent, as shown in Table VI.

TABLE VI

SEVERE DIABETIC ACIDOSIS

CO_2 Combining Power 20 Vol.% and Below—64 Cases

1. Average Initial CO_2	13.6 vols.%
A. Treated with normal saline	15.6 vols.%
B. Treated with sodium lactate	13.2 vols.%
2. Average CO_2 at the end of 12 hours:	
A. Treated with normal saline	33.3 vols.%
B. Treated with sodium lactate	47.4 vols.%
3. Average CO_2 at the end of 24 hours:	
Treated with sodium lactate	51.3 vols.%

At the end of the first 24 hours, the carbon dioxide combining power in those cases which received sodium lactate was 51.3 vols. per cent. In a report of another series in which an alkali was not used, it was noted that the carbon dioxide combining power was "12 vols. per cent initially; this had risen to 30 vols. per cent on the second hospital day, and on the third hospital day to 42 vols. per cent".[1] It has been argued that the use of an alkali "may actually be harmful and may divert attention from the truly important matter of giving enough insulin".[1] The use of sodium lactate has been favored in our series and we have not observed any harmful effects from its use. The patients treated with sodium lactate and saline received on an average a greater total sodium intake than those treated with saline alone. This was undoubtedly a factor in the more rapid rise of the plasma carbon dioxide combining power in the first group of cases. However, sodium lactate has been shown by other workers to be more efficacious in increasing the alkali reserve than sodium chloride because of the prompt liberation of the sodium ion. It is our impression that not only does the carbon dioxide combining power of the plasma increase more rapidly in the patients who are given sodium lactate solution, but also that clinical improvement occurs sooner, other factors being equal. In cases of *severe* acidosis with marked depression of the carbon dioxide combining power, we believe that it should be of considerable benefit to correct the acid-base balance to physiological levels in as rapid a manner as possible.

The early administration of glucose was not a part of the routine treatment of this series of cases, but it was used frequently after the preliminary large doses of insulin. Peters,[3] Almy *et al*,[2] and Conn and Bauer[4] offer convincing reasons for the early use of glucose. Glucose will prevent so-called "starvation diabetes", hypoglycemia and consequent prolongation of acidosis and ketonuria.

SUMMARY

1. One hundred and five cases of diabetic acidosis treated at the University of Virginia Hospital are reviewed. The crude mortality rate in this series was 7.62 per cent.

2. In 64 cases of severe diabetic acidosis, the crude mortality rate was 7.81 per cent. There were 3 (14.25 per cent) deaths in the 21 comatose patients, whereas only 2 (4.65 per cent) of the 43 semi-comatose ones died.

3. A program of treatment of diabetic acidosis is outlined.

4. Intravenous sodium lactate solution (1/6 molar) was used initially in two-thirds of the cases of severe acidosis. No harmful effects were noted and a more rapid rise of the carbon dioxide combining power of the plasma was obtained.

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EXPERIENCES OF AN OPHTHALMOLOGIST ABOARD A HOSPITAL SHIP*

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At the outset of this presentation let me say that I am not attempting in any way to deliver a scientific exposé, nor a statistical report of the work that is done by a hospital ship in the advanced theatres of war. Such matters are better left to more capable scientific and statistical minds than mine. It has occurred to me, however, that a report from one who was fortunate enough to have such duty might be of some interest to the members of this Society.

There are two main functions of a Navy hospital ship which are paramount above all else. These are to evacuate wounded personnel from the beachheads and to act as a floating hospital for the fleet in advanced areas. Subsidiary functions may be listed as: (1) To act as a medical supply depot for the other ships of the fleet; (2) To furnish library facilities for the medical officers of the fleet; and (3) To provide consultation facilities for other ships and for any shore based Army or Navy units that may desire them.

The personnel of such a ship is divided into the line and the staff, the latter consisting of the medical department and the supply department. In my own ship, the U. S. S. Relief, the medical department consisted of twelve regularly assigned medical officers, four dental officers, twelve nurses, and approximately one hundred and eighty hospital corpsmen. The medical officers included the senior medical officer, the chief of surgery with two other surgeons, the chief of medicine with two other internists, the otolaryngologist, the ophthalmologist, the urologist, the roentgenologist and the pathologist. In addition to these there were two surgeons assigned to the ship for temporary duty in each major campaign. Invaluable assistance was rendered on beachhead evacuations by the four dental officers who worked in the wards giving blood and plasma transfusions, administering anesthesia, and helping with dressings on patients.

Physically the ship was built much like any good hospital ashore with the exception that in the wards the bunks, which had very comfortable springs and mattresses, were either in two or three tiers. However, there was always enough space allowed so that the patients could be handled properly in their bunks. Operating facilities consisted of one main operating room with three tables ready for immediate use, a smaller operating room in the eye, ear, nose, and throat clinic with one table, and operating tables in dressing rooms off three of the larger wards. This gave us a total of seven operating tables which could be put to immediate use when casualties were brought aboard. With a medical complement such as ours the question will undoubtedly arise as to how we obtained assistance in the operating room. Most of this came from hospital corpsmen who were trained operating room technicians and who did a grand job in helping out.

In addition to the surgical set-up there were various other departments on the ship, such as a completely equipped x-ray department; a complete laboratory, including rabbits and guinea pigs for experimental purposes; a department of physiotherapy; the dental department with four operating chairs and a complete laboratory for the manufacture of dentures; spaces set aside for the taking of electrocardiograms and basal metabolic rates; and, last, but I think by no means least, the eye, ear, nose, and throat department.

In regard to the latter I should perhaps go into a little more detail as to the physical set-up. As I have stated before, there was a medium sized operating room with one operating table and two treatment chairs in the same room. We had a small office and a refraction range which, when closed off, made our dark room. In this we had the perimeter and slit-lamp. We were fortunate, and I think rather unique, in that we had both an ophthalmologist and an otolaryngologist. Until I joined the ship in the summer of 1943 these two departments had been combined, but it was found that there was enough work for two men and so I was sent out as the ophthalmologist. This worked out ideally, for during a good deal of the time, between invasions, we were engaged in servicing the fleet and, on such occasions, it was not unusual to run from fifteen to eighteen refractions a morning, with

*Read before the Virginia Society of Ophthalmology and Oto-Laryngology at Roanoke, May 4, 1946.

operations in the afternoon and consultations sandwiched in between. On the ear, nose, and throat side I have seen frequently as many as five tonsillectomies plus a submucous resection scheduled for the same morning. Our assistance in the clinic consisted of four hospital corpsmen who were trained in eye and in ear, nose, and throat work and who proved to be invaluable.

In connection with the above mentioned operating schedules in our department a word of explanation might be interjected at this point. One might well wonder why elective procedures were carried out aboard a hospital ship in the advanced theatres of war. When we were acting as a hospital for the fleet it was our policy to do anything that was required, just as we would have done had be been located in a hospital ashore. For instance, if the medical officer of a battleship felt that one of his crew was handicapped in the performance of duty by some bad tonsils, or a squint, the patient would be accepted aboard our ship for such surgery as was indicated. It stands to reason that such cases were not accepted when there was an invasion imminent or when there was a possibility that we would be moved.

The question of eye instruments presented an interesting problem at times and serves to show what can be done aboard such a ship with proper coordination. When I joined the ship the instruments for eye surgery, while adequate, were not all that was to be desired. Orders were immediately placed for additional instruments but due to the movements of the ship, and the rapid progress of the war, these orders never caught up with us. I found that we had no satisfactory means for localizing intraocular foreign bodies and, since I had been brought up with the Pfeiffer modification of the Comberg technic, I ordered such an apparatus. It did not arrive and I was forced to enlist the help of the dental department. One of the dental officers agreed to help me and we took a mold of a volunteer's eye and then the dentist made a transparent acrylic lens from the mold. Four small holes were drilled in this lens at the limbus at 12, 3, 6, and 9 o'clock and these filled with silver amalgam. This gave us a very satisfactory contact lens for localizations and proved invaluable in numerous instances thereafter.

Another instance of manufacturing instruments came in the quest for a handy knife for use in opening the sclera posteriorly in cases of intraocular foreign bodies. We had many of these cases and it seemed to me the Graefe knife was at best an unwieldy instrument for posterior incisions in the sclera. Consequently, I gave a muscle hook to one of the machinist's mates and asked him to work out on it. We finally emerged with a square blade about one millimeter on a side and with two cutting edges, one on the under surface and one on the inner surface of the blade. The shaft of the instrument from the blade to the handle was notched in millimeters so that one could tell fairly accurately how far posterior to the limbus he was placing the blade. This same machinist, although used to working on giant turbines and other large machinery, also modified a small forceps for me by fashioning two tiny cups on the blades. This was used for the extraction of non-magnetic foreign bodies from the vitreous in such cases where the foreign body could be seen with the ophthalmoscope.

The ship was designed to take care of approximately four hundred and fifty patients in the wards and rooms. All of these were located above the waterline with good ventilation by portholes and blowers. These accommodations were perfectly adequate when we were servicing the fleet, for in such a case we did not usually run more than three hundred patients aboard at any one time. For invasions of enemy territory, however, we realized that this number of beds would be inadequate and, consequently, on such occasions, the ward space was modified considerably. The crew moved out of their compartments and these were converted into wards, the crew sleeping in cots and hammocks on the main deck which was enclosed in canvas for the emergency. The entire promenade deck was also enclosed in canvas and cots placed on it throughout its length, this deck then being used for an additional large ward. These measures gave us a total of approximately seven hundred beds ready for use when we came into a battle area.

It might be thought that with a group of medical specialists aboard everyone stuck to his own specialty. This was the case at all times except when we were taking wounded aboard from the battle area. I have seen seven hundred badly wounded men come aboard within a space of a little over four hours and it must be obvious that in such a time there is no immediate place for specialization.

Everyone pitches in and does what he can. Probably the most important immediate thing is the treatment of shock and every single person available lends a hand in this. My own ward in these instances had seventy-two bunks in it. In this I had all the primary eye cases, which would usually run about twenty-five to thirty, and the remainder of the space was taken up with every conceivable kind of wound. If major surgery was required these patients were made as fit as possible and sent to the main operating room. If minor surgery was all that was indicated, that was taken care of in the ward dressing room.

In an attempt to show the duties of this type of ship in her primary role, it might be well to try to describe our first mission of this type. Prior to the opening of the Marshall Islands campaign in late January, 1944, hospital ships had never been sent into a beachhead, but, in accordance with the Geneva Convention rules, stayed five hundred miles away from the battle zones. It is true that during the Gilbert Islands operations the only two hospital ships then in the Pacific, the Relief and the Solace, were ordered into the Gilberts but neither one of us went to Tarawa, where the fighting was heaviest. We hove to off the island of Apamama and took casualties that transports brought out to us. However, with the opening of the Marshalls offensive we went into the beaches for the first time.

During the night of D Day in the Marshalls we were heading for Kwajalein, steaming alone and fully lighted, up the middle of a channel with Japanese held islands on either side. Although nothing was said about the matter, I am sure that there was a certain feeling of tension throughout the ship that night. There is something about a torpedo striking a ship such as ours in the dark that seems to have a very permanent quality about it. We got through the night all right and the next morning at daybreak we could see smoke ahead of us on the horizon. This came from fires on Kwajalein island we learned later. By nine o'clock we had come up to the island and entered the lagoon by one of the passes. Our own fighting ships were outside this lagoon pouring fire into the island. Army troops had gone ashore there the day before. We anchored about four miles off the beach and soon small landing craft began to come alongside with wounded. These were brought aboard by stretchers up the main gangway and, as they passed into the ship, were screened by a team of three medical officers who directed them to the proper wards. By that afternoon it was realized that we were too far off the beach to give the best service, and that the wounded had a long trip in small boats before they could reach us. Therefore we moved in to within about a mile of the beach. From this vantage point we truly had a box seat for the fighting ashore. We took casualties all night and all the next day and by six that evening were loaded and underway for Pearl Harbor with over six hundred casualties aboard.

Under such conditions everything is not always ideal for surgery, and a case of mine will serve to illustrate what I am sure has happened to all doctors who have worked under such conditions. During the process of taking patients aboard at Kwajalein I happened to step out on the quarterdeck at the same time that an eye case was brought aboard. He proved to have a laceration of the cornea running directly across its widest diameter. His was a very recent injury and I wanted to repair it as quickly as possible but a checkup showed that every operating table in the ship was full at the time, and would be for some hours. The man was put on an ordinary wooden table in the master-at-arms shack and some instruments were obtained. With the aid of the chief master-at-arms holding an ordinary flashlight, and one of the laboratory technicians acting as scrub nurse, an iridectomy was done and the corneal laceration covered by a conjunctival flap in an entirely uneventful procedure.

During, and after, these beachhead operations there is relatively little or no rest until the ship is about three days on the way to a rear area. In these first few days there is too much to be done in the way of caring for the patients, many of whom are in critical condition, to worry about resting. One cannot help feeling that these wounded lads have given much more than we have and it is up to us to give them our best. And here I should like to pay a word of tribute to two groups, first, the wounded American fighting man of whom nothing that has been said in praise is too extravagant. No matter how great the pain, nor how grave his condition, he thinks of his wounded comrades first and, as one of our correspondents has so ably said, "the wounded don't cry." This is in decided con-

trast to the wounded Japanese, and I know them almost as well as I know the Americans for we took three hundred out of Saipan at one time. And, secondly, I should like to pay a word of tribute to my own shipmates for their dogged devotion to duty, their ability to work long hours, stretching into days, in operating room and wards, without rest and still keep going, whether it is operating or carrying food to the sick or being helpful in a hundred other different ways. I have watched lads of the black gang who have been standing a fire room watch for four hours, and I can assure you that is no fun in the tropics, come off watch and go up to the Officer of the Deck and volunteer for duty as a stretcher bearer, work for eight hours handling stretchers from small boats in heavy seas, and then go back to the fire room for their next regular watch only to repeat the process for days while we were loading. These, then, are the men with whom I have served, and they constitute the main reason why I shall always count it a privilege to have served in a hospital ship in time of war. I have seen them in health, and in sickness, and I have watched them die, and rarely is there one found wanting in any respect.

Cheap Glasses Cause Eye Distress.

Many poorly fitting and cheap glasses cause ocular distress and headaches, according to the December 7 issue of *The Journal of the American Medical Association.*

"A person who has such distress when he wears glasses naturally takes them off, just as a man takes off a pair of shoes that does not fit him comfortably," *The Journal* states in answer to a query.

In discussing the harmful or beneficial effects of the average sun glasses on the eyes, *The Journal* states:

"The average sun glasses, obtained in drug and ten cent stores, if sufficiently dark, are as a rule comforting to the eyes of the average wearer on an average bright day, on the water or on the beach, where they are usually used. They reduce the total amount of light entering the eyes. The idea that certain makes of glass do not transmit the 'harmful' ultraviolet light is mostly sales talk, as the ordinary white glass allows but little ultraviolet light to pass through. In fact, in order to obtain passage for ultraviolet through a window pane it has to be specially made for that purpose. A certain amount of ultraviolet light is beneficial to the eyes; it is for this reason that vacations are taken at the seashore and in the mountains, and in the winter patients are sent to sunny climes."

Arrest Tumor of Bone Marrow.

Two new English drugs, used in a New York hospital, have proved effective in checking multiple myeloma, a malignant tumor of the bone marrow.

No effective form of therapy was known for this highly fatal disease until these drugs—Stilbamidine and Pentamidine—demonstrated their tumor controlling and pain relieving properties.

Writing in the January 18 issue of *The Journal of the American Medical Association,* Isidore Snapper, M.D., from the Second Medical Service of the Mount Sinai Hospital, New York, reviews the treatment of 15 patients.

He states that "all these patients were suffering excruciating pains when the treatment was begun. Thirteen were immobilized in bed. All 15 improved considerably as far as the pain itself was concerned. Eleven could walk at the time of discharge from the hospital."

Dr. Snapper points out that the "treatment merely checks the disease and does not cure it."

This disease, usually associated with anemia, causes neuralgic pains. Later, painful swellings appear on the ribs and skull and spontaneous fractures may occur.

Injections into the veins of Stilbamidine proved successful in the majority of patients. However, in two who were not helped by Stilbamidine, Pentamidine was effective.

MEDIASTINAL SYMPATHOBLASTOMA (NEUROBLASTOMA)

Report of Two Cases With Necropsies and Review of the Literature

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The mediastinum is an infrequent primary site of sympathoblastoma. Because only thirteen papers reporting fourteen well documented cases could be found in a review of the literature, it was thought advisable to add two of our own radiologically studied cases, both proven by necropsies.

Previous reports listing fully the age, sex, exact location, metastases when present, gross and microscopic appearances have been made by Anderson and Shennan,[1] Bridge,[2] Capaldi,[3] Cushing and Wolbach,[4] Frost and Wolpaw,[6] Hartung and Rubert[7] (2 cases), Lee and Ritter,[8] Sailer,[10] Scott and Palmer,[11] Stern and Newns,[12] Wahl and Robinson,[13] Wahlgren and Rudberg,[14] and Wissler.[15] Historically, in all discussions of mediastinal tumors of the sympathetic nervous system, the papers of Friedrich[5] and Loretz[9] are mentioned. However, both of these authors reported cases in which the predominating cells of the tumors were ganglioneuromas. Likewise, the recent excellent review of Sailer[10] recorded 13 cases of sympathetic tumors occurring within the thorax, only seven of which showed a preponderance of cells warranting the diagnosis of sympathoblastoma. Wahl and Robinson,[13] in 1943, in discussing ganglio neuroma and neuroblastoma state that, "neuroblastoma of the mediastinum is less frequent, but 13 cases have been reported out of approximately 200 cases of neuroblastoma in the entire literature." Two authors cite another paper as reporting four mediastinal tumors in a series of forty neuroblastomas, but a study of the original article showed that the mediastinal tumors were metastases from primary adrenal sites.

In the fourteen well documented cases found in the literature, there were 7 females, 4 males and in three, information as to sex was not available. The ages were 12 weeks, 5 and 22 months, 2, 2½, 4, 5, 5, 7, 38, 44 and 65 years, with one infant and one child the exact ages not known. One patient was colored. Our two cases were in white males aged 68 and 23 years.

The tumor sites were in the upper right posterior thorax near the lung apex in the lower cervical and upper dorsal region in five cases, the upper left posterior thorax, in lower cervical and upper dorsal region in two cases, the right posterior lower thorax in two cases, the left posterior lower thorax in one case, the superior central mediastinum in one case, the sixth dorsal laminae in one case, and in two the sites not known to us. Our two cases were somewhat centrally placed in the posterior superior mediastinum.

The gross size was not given in one case, not known in two cases, and descriptions varied from ovoid masses, 4.2 cms. in length and 2.8 cms. in diameter, to masses 13 by 13 by 7.5 cms. with frequent descriptions varying from orange size to pigeon's egg and bean size. Diameters of 5 or 6 cms. were most frequent.

Nine cases showed metastases and in most instances these were extensive. Three showed no metastases and the case reported by Cushing and Wolbach,[4] originally operated upon by McGuire in 1911 with microscopic finding of sympathoblastoma and reoperated upon by Cushing in 1921 with microscopic diagnosis of ganglioneuroma is known to be living in Richmond, Virginia, in 1946, thirty-five years after the original operation. Our case in the older man showed only thoracic metastases, but the case in the younger man showed thoracic and abdominal metastases.

Our first case showed only slight demonstrable changes in the width of his mediastinum following roentgen therapy with, however, moderate symptomatic response with diminution of venous engorgement and swelling of his neck. Our second case responded moderately well to deep roentgen therapy and lived seven years from the onset of symptoms and five years after the beginning of radiation treatment. During the last three years the mediastinal and thoracic tumors became increasingly resistant.

CASE REPORTS

Case 1.—H. E. F., a 65-year old white bricklayer, was seen in the Out-Patient Clinic in August, 1942, and the findings of "disorientation, cardiac enlargement, and auricular fibrillation" noted. He

failed to return to the clinic until June, 1944, six months after a fall which knocked him unconscious. During the six months after his injury, he had a total of five convulsive seizures each followed by a short period of amnesia. He denied any history of previous epileptiform seizures. There was no family history of epilepsy or other familial diseases.

On June 12, 1945, the patient was again seen in the clinic and was referred to the hospital because of painless swelling of the face and neck of two weeks' duration. His arms had begun swelling 2-3 days before admission. There had been no swelling of the lower extremities. He complained of mild dyspnea, but had had no cough, dysphagia, voice changes or weight loss. Admission temperature was 98° F., pulse 94, respiration 20, blood pressure 108 systolic and 80 diastolic. He had moderate pitting edema of the face, neck, and arms with slight edema of the upper thorax. There was marked distention of the neck veins and some venous distention and telangiectasis of the chest wall anteriorly and posteriorly. There was slight cardiac enlargement with distant heart sounds and with irregular rhythm caused by auricular premature beats.

Laboratory Data: The Kline test was negative; non-protein nitrogen 27 mgm. per 100 c.c.; hemoglobin 90 per cent, white blood count 4,500 with 52 per cent polymorphonuclears and 42 per cent lymphocytes. Urine examination was also negative. The venous pressure in the left arm was 422 mm. saline.

Chest film on June 11, 1945, and fluoroscopy had shown a moderate cardiac enlargement and slight, diffuse enlargement of the thoracic aorta. There was very slight widening of the upper mediastinum with no pulsation in this area and no displacement of trachea of esophagus.

On June 21st biopsy of a right axillary node was made. The pathological report was, "reticulum hyperplasia of lymph node."

Roentgen therapy was begun four days later and a total of 600 r (using 200 KVP, 20 ma., 50 cm. distance, thoreus No. 1 filter and a 20 x 20 cm. portal) was given to anterior and posterior mediastinum in 200 r (air) doses with one portal daily. Dyspnea and swelling improved slightly in five days and the patient was discharged to the Out-Patient Clinic.

Three months later, enlarged, bilateral anterior cervical nodes were felt and 200 r given to each side of the neck.

In January, 1946, he began having pain in the back of his neck and in both shoulders radiating down his arms. He had lost about 20 pounds in weight since his discharge from the hospital and had developed an exhausting cough only slightly productive of mucoid material. Some peripheral cyanosis was noted.

He became progressively worse with severe dyspnea, and he was readmitted to the hospital on February 2, 1946. The physical findings were those of massive left pleural effusion with remarkable distention of the veins of the neck and upper extremities and of the superficial thoracic and paraumbilical veins with generalized peripheral cyanosis. The venous pressure was more than 50 cm. saline in both arms. Routine blood and urine examinations were negative. Electrocardiogram showed auricular fibrillation and severe myocardial disease.

Thoracentesis was done on February 27th and 1,500 c.c. of clear amber fluid, specific gravity 1.015 was removed. A thick white clot formed in the fluid immediately after removal.

The patient died the following day.

Necropsy (only chest and abdomen permitted).

Exterior: There was very marked engorgement of all the superficial veins of the neck, arms, chest, and abdomen. A subcutaneuos node 1 cm. in diameter was found in the right chest wall below the clavicle in the mammary line.

Pericardial Cavity: The pericardial surfaces were smooth, moist, and glistening. The pericardial sac was filled with 400 c.c. of clear yellow fluid.

Pleural Cavities: About 1,400 c.c. of clear brown fluid was obtained from the left pleural cavity and there was a thin, yellowish membrane over the entire pleural surface on that side. On the right side, 880 c.c. of clear yellow fluid was obtained.

Mediastinum: In the superior central mediastinum was a firm, oval, nodular mass about 8 cm. in diameter and fixed to the surrounding structures. It was bounded laterally by the hila of both lungs and superiorly by the arch of the aorta. The mass extended inferiorly to 2 cm. above the auricles and posteriorly against the bifurcation of the trachea partially surrounding it laterally and extending up along the trachea for 3 cm. above the bifurcation. There was extension of the mass 3 cm. below the bifurcation of the trachea and along the right and

left main bronchi anteriorly for 4 cm. on either side. There was no evidence of pressure and no gross involvement of the epithelial lining of the trachea or bronchi. The lymph nodes in this area were large and granular, some measuring as much as 3 cm. in diameter. Hilar nodes and the mass occluded by pressure the right middle lobe bronchus. The tumor mass enclosed and completely obstructed the superior vena cava 2 cm. above the right auricle and extended up along the wall of the vena cava for 3 cm. There was invasion of the lumen of the vessel with definite involvement of the intima. The mass within the lumen of the vessel had a papillary appearance at either end. The inferior vena cava was not involved. The pulmonary veins entering the left auricle were surrounded by the growth with no constriction of the left veins but with the right pulmonary veins constricted so that their opening into the auricle was slit-like, 1 cm. in width and 1 cm. in length. There was no apparent involvement of the vessel endothelium.

Lungs: The left lung was a dark, blue-brown color and was partially collapsed, feeling firmer than normal and appearing somewhat granular. The apex was adherent to the chest cavity posteriorly. On section, the lung substance was a dark brown-red color and very moist. Brownish, frothy fluid was expressed. The right lung was a pale red-gray color with patchy black areas. The upper lobe was partially collapsed and the middle lobe completely collapsed. There were several small emphysematous blebs about 2 cm. in diameter in the right apex. Infrequent, small, nodular masses were palpated in the upper and lower lobes and upon section; the masses were black and gray in color. There was a firm, meaty mass, scarred in appearance, approximately 2.5 x 3 cm. in the periphery on the lateral inferior border of the upper lobe.

Heart: There was definite right and left auricular and right ventricular dilatation. The coronary vessels were not remarkable. The left ventricle measured 1.5 cm. in thickness. The mitral valve had small, firm nodules about 2.5 mm. in diameter attached to its outer edge. The aortic valves were slightly thickened.

Spleen: The spleen was small, soft, and pale blue-gray in color with a wrinkled capsule. The pulp was a dark, reddish gray color and very granular.

The adrenals, stomach, intestines, pancreas, and gall-bladder were normal.

Liver: The liver weighed 1,600 gm. and was pale, brownish gray, finely granular, with liver edges sharp. There was a small black area 2 cm. in diameter and resembling a hemangioma on the left outer lobe.

The bladder and prostate were normal.

The abdominal aorta had a firm, gritty feeling with yellowish deposits under the endothelium. The renal arteries were tortuous and firm.

Microscopic Description: Sections of the superior vena cava showed the tumor mass extending into the wall of the blood vessel. The tumor cells were large and consisted of granular nuclei with no cytoplasm. There were several large areas of necrosis. The Foot silver stain showed no fibrillar processes and only a very few fibers. The Masson stain showed a very few fibrous cells within the tumor. Mallory's stain showed no glia. The tumor mass was seen in a lymph node with the immature neurogenic cells arranged in rosettes throughout. Many of the cells were somewhat club-shaped and elongated. Sections of the lung showed the alveoli filled with polymorphonuclear leucocytes, fibrin and a homogenous gray substance. The alveolar walls were edematous and injected. There were a few "heart failure cells" present. One area showed a fibrosed, homogenous area of inactive tuberculosis. All lung sections showed a mild degree of anthracosis. The skin node and bronchial and tracheal nodes all showed anaplastic cells similar to those in the tumor mass in the mediastinum. Section of the kidney showed patchy scarring with fibrosis of the glomeruli and tubercles in a V-shaped lesion the apex of which pointed into the kidney. All of the vessels were injected and the tufts were injected and full of red blood cells. The spleen showed an abundance of red blood cells with a decrease in the lymphoid cells and some increase in fibrous tissue. A section of the liver showed degeneration with moderate hemorrhage around the central vein. There was fibrosis in the aortic valve. The abdominal aorta showed a thick, homogenous gray area in the intima.

Pathological Diagnosis: Mediastinal neuroblastoma invading and totally obstructing the superior vena cava and partially obstructing the right pulmonary veins. Metastases extended to the tracheobronchial lymph nodes and to the skin over the right chest. There was marked distention of the collateral

venous circulation of head, trunk, and upper extremities. Hydrothorax was bilateral and there was hydropericardium. An old healed tuberculous lesion of the right upper lobe was noted at the lateral inferior border, as was emphysema of the lung at its right superior border. Benign nephrosclerosis was marked, and there was a mild generalized arteriosclerosis.

Case 2.—K. A., a 23-year old white male, was first admitted to the Medical College of Virginia Hospital on October 11, 1941, because of right pleuritic pain of three weeks' duration and low-grade fever. His illness apparently began, however, in April, 1938, when he had an illness characterized by a febrile course of several days' duration and thought to be influenza. Later that year, he again had some fever which was accompanied by right chest pain with radiation to his shoulder and back. Several days after the pain began, he was found in a state of collapse, and a diagnosis of "acute dilatation of the heart, probably produced by excessive physical effort," was made. He was hospitalized for approximately two months. After that, he did well until August, 1939, when he had what was thought to be malaria. In January, 1940, while he was working in Kentucky, he had another attack of what was thought to be pneumonia. Some straw-colored fluid was drawn from his chest at that time. In July, 1940, there was a recurrence of chest pain and fever. A chest film was made, and he was given x-ray treatments every 2-3 days to a total of approximately 12 treatments, with rather marked improvement clinically.

Examination upon admission revealed evidence of right pleural effusion and engorgement of the right jugular vein. Urine examination was negative. The Kline test was negative and there was no anemia. The white blood count was 14,420, with 64 per cent polymorphonuclears, 25 per cent lymphocytes, 8 per cent eosinophils and 3 per cent mononuclears.

Thoracentesis on the right was done on October 13th, and 120 c.c. of bloody fluid obtained. No tumor cells were seen in the fluid and smears were negative for tubercle bacilli. A chest film after thoracentesis showed a marked density extending out from the right hilum with oval densities in the right first interspace and at the left hilum—thought to be possible metastases. He was discharged October 21st, somewhat improved.

On July 17, 1942, he was again admitted to the hospital because of right chest pain, pleuritic in character, dyspnea, and low-grade fever. He had had moderate night sweats but no cough. Chest film upon this admission showed the density at the right hilum and lower cardiac border to be smaller than before but with two smaller nodes at the right hilum and a large oval nodule adjacent to the right dome of the diaphragm. These had the appearance of metastatic nodules of some new-growth. The heart and great vessels were not enlarged. Routine laboratory data was not remarkable.

Electrocardiogram was within normal limits.

Bronchoscopy was done on July 21st and there was no evidence of an intra-bronchial lesion. Both sides were thoroughly examined. There was a little bit of secretion coming from the posterior division of the right lower lobe bronchus, but there was no evidence of infiltration in the bronchial wall.

Roentgen therapy was given to the anterior and posterior chest, right and left sides, with a total of 1,000 r (air) to each of the posterior portals and 900 r (air) to each of the anterior portals, giving 100 r and 200 r doses to each of two portals daily, using 200 KV, Thoreus 1 filter, 20 ma., 50 cm. TSD, and 20 x 20 cm. portals. He improved fairly rapidly and did well for about seven months with a slight decrease in the size of the right hilum and lower right lung nodules. Then he began going slowly downhill. Roentgen therapy was repeated in March, August and November of 1943 and in January, 1944.

In spite of x-ray treatment, the pain in his right chest became frequent and nagging and repeated fluoroscopies showed no change in the right lung and hilum nodules. He occasionally expectorated bloody fluid and upon two occasions (October 20, 1943, and November 2, 1944) he expectorated tissue fragments which were diagnosed as "reticulum-cell sarcoma". After the third course of roentgen therapy, only occasional small doses of 100 r or sometimes 200 r were given over the right hilum and right lower lung nodule.

During the last six months of his life, he was almost completely bed-ridden with nagging right chest pain radiating to his back, severe dyspnea, cough, anorexia and pitting edema. He was again admitted to the hospital March 21, 1945, and died the following morning in acute respiratory distress.

Necropsy: (Only chest and abdomen permitted).

Exterior: There was moderate emaciation with moderate pitting edema of both ankles, marked edema of the left arm and hand and less marked edema of the right upper extremity. There was a small healing ulcer about 1 cm. in diameter on the sacrum. The mid-thoracic spine curved markedly to the left with compensatory scoliosis in the lumbar region.

Thorax: The pericardium was about 5 mm. thick anteriorly and was adherent by fibrous adhesions to the epicardium. The left lung was atelectatic but there were no left pleural adhesions. The mediastinum was densely adherent to the midline of the sternum about 4 cm. inferior to the gladiomanubrial joint. There were manually inseparable adhesions to the right lateral, posterior, and diaphragmatic surfaces. Externally, the left lung was red and non-crepitant and the right lung was gray and firm. A firm, gray mass of tissue was palpated in the upper anterior mediastinal space and it extended cephalad to encase the innominate and the left subclavian veins. The mediastinal lymph nodes measured up to 3 cm. in diameter and were firm and gray.

Heart: The myocardium and valves appeared normal with no thickening of the left ventricular wall. A soft, gray, polypoid mass extended from the main right pulmonary vein into the right auricle and nearly filled the cavity of the auricle.

Lungs: The left lung was firm and red with a red, frothy fluid exuding from the cut surface. Only a small patch about 6 cm. in diameter in the upper lobe was crepitant and gray. The medial margin of the lower lobe was firm, dark red, and well-demarcated from the remainder of the lobe. On the right, the visceral pleura was firm, white to gray, and varied from 5 mm. to 1.0 cm. in thickness. It was adherent to the parietal pleura and was continuous with the inter- and intra-lobar septa. In the lower lobe posteriorly were a number of confluent areas composed of atypical degenerating and yellow zones forming a mass about 5 cm. in diameter which extended upward to the hilum. In the diaphragmatic pleura was a nodule 4 x 2 cm., very firm and apparently partly calcified. The posterior pleura of the lower lobe was firmly adherent to the adjacent ribs and intercostal tissue for an area about 6 cm. in diameter. The trachea and main bronchi were apparently normal but the neoplasm encroached upon the right lower lobe bronchus posteriorly.

Abdomen: The peritoneal cavity contained about 100 c.c. of straw-colored fluid. The liver was densely adherent to the medial surface of the right diaphragm in an area 2 cm. in diameter. The viscerae elsewhere were smooth, moist and glistening, and appeared normally placed.

The spleen, adrenals, stomach, pancreas, and gallbladder appeared normal.

Kidneys: The kidneys weighed 190 gm. each. There was a firm yellow depression measuring 2 cm. in its longest diameter in the upper pole of the right kidney. A similar, smaller area was found in the lower pole of the right kidney and one in the upper pole of the left kidney. Upon section, the depressed areas were about 6 mm. in thickness. The kidneys appeared otherwise normal.

Liver: The liver weighed 1,200 gm. The lower margins were sharp and glistening except for a diaphragmatic adhesion noted above. It was brownish-red and firm. Upon multiple section, the surfaces were firm, brownish-red and the periphery of the lobules deep red and well-defined. There were a few small areas of gray, firm tissue measuring up to 2 cm. in the upper and lower poles of the liver.

The bladder, prostate and intestines appeared normal.

Abdominal Aorta: The abdominal aorta was reduced in caliber to about 2 cm. by a cuirasse of firm, gray tissue. The intima showed a few small yellow plaques measuring about 2 mm. in diameter.

Microscopic Examination: Numerous sections through the tumor tissue in the mediastinum, heart, and lungs had the same appearance. The cells were large, pale, and contained rather elongated to round vesicular nuclei. The cells varied little in size and staining quality but showed numerous mitotic figures. They tended to arrange themselves in groups to form not only pseudo-rosettes but also true rosettes. The myocardial fibers were very edematous and fragmented. In one section, taken through the auricle, the lining of the epicardium was thickened by fibrosis apparently due to organization of an old thrombus. Between the areas of fibrosis, there were a few small fragments of typical tumor tissue. The lungs were marked by the presence of nodules of characteristic tumor tissue, some growing within the bronchi and apparently extending in this man-

ner into the lungs. They had grown in a concentric manner, compressing the surrounding pulmonary tissue, thus producing marked atelectasis. In some areas taken from the lungs, the pleura showed very dense fibrosis and hyalinization, apparently the result of repeated radiation, but within the alveoli were numerous foam cells and edema fluid. Aside from chronic passive congestion demonstrated by destruction of the central portion of the lobules by a marked congestion and the presence of a few polymorphonuclear leucocytes in these areas, the liver tissue showed replacement by the same type of tumor seen in the mediastinal neoplasm. Here again, concentric growth was demonstrable by pressure upon the surrounding tissue. Sections of the kidneys showed normal organs except for an area of ischemic infarction where the cells and nuclei had lost their differential staining powers and the tissue had assumed a pale, homogenous pink staining of coagulation necrosis. A section of the intestine showed complete autolysis of the lining mucosa. Bone marrow from a few sites showed a normal, active marrow.

Pathological Diagnosis: Mediastinal neuroblastoma involving the right cardiac auricle, the right lung, the pleura, diaphragm, liver, mediastinal and peri-aortic lymph nodes; accretio and concretio pericardii; pitting edema of the extremities; small decubitus ulcer of the sacrum; ischemic renal infarcts; scoliosis of the spine.

SUMMARY

Fourteen cases of mediastinal sympathoblastoma were found in a review of the literature and two more cases with necropsies have been added. Our two cases were considered to be lymphomas until the final microscopic studies were made. Sympathoblastoma should be constantly kept in mind in the differential diagnosis of all mediastinal tumors.

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PERSISTENTLY SERO-POSITIVE REACTION FOR SYPHILIS IN CHRONIC BRUCELLOSIS*

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This report seems to me of general interest because it compels us to reconsider diagnostic procedures in a new light.

The patient is a 40-year old male. He always has been a nervous type. He had frequent spells of "nervous colitis". Several attacks of sore throat had led to a tonsillectomy. No other diseases or operations are recorded in his history.

In 1939, when his eyes were tested for glasses, a routine blood test showed up positive. When the patient denied any history of infection, this test was repeated and was negative.

1941, the patient had a general check-up that was completely negative except a positive blood test. When a control test was negative the physician advised the man to forget about it.

In summer, 1944, the patient consulted me for diarrhea that responded to routine treatment.

In September, 1944, cramps in his legs, difficulty of walking after leaving the bed in the morning, radiating pains into his legs and general weakness were noticed.

In October, 1944, the patient had fever in the evening. X-ray showed some peribronchial infiltration of the lower lobes that developed within a few days to an infiltration of the right lung. There was no response to penicillin. The fever dropped gradually without special therapy, and the lungs cleared up. The infiltration was considered a virus pneumonia. Blood Kahn and Wassermann tests done at that time were ++++, spinal puncture and Wassermann negative. Blood count: Hb. 91%, Eryth. 3640000, Leucoc. 9600, Band cells 5, segment. 66, lympho 24, mono 4, eosino. 1. Urine negative. Agglutination: negative. Normal recovery of the patient.

During 1945, the patient felt weak and got tired quick. No complaints, but some diarrhea occasionally. X-ray of G-I tract was normal. A general check-up, in December, 1945, showed a low blood pressure of 95/60 mm. Hg. Hemoglobin 78% (Sahli), Eryth. 4200000, Leuc. 9050. Normal differential count. Increased sedimentation rate (Westergren) 45 in the first hour. Kahn tests in two different laboratories showed one positive and one doubtful.

On January 20th, 1946, the patient was taken acutely sick with temperature of 102°, diarrhea, nausea, some vomiting and cramps in his abdomen. This acute gastro-intestinal infection responded to routine treatment.

On the second day of this sickness agglutination for typhoid (H-antigen) was positive 1 : 40 (rapid slide agglutination test, Health Dept., Luray), but there were no clinical signs of typhoid. On the 7th day agglutination for typhoid was negative (Health Dept., Richmond), but positive 1 : 20 for undulant fever. Stool, urine, and blood cultures were negative, but Kahn test was ++++ again.

The patient consented to going to Johns Hopkins Hospital, in Baltimore, for further study. He still denied any history of luetic infection and was worried very much about the different positive blood tests. Clinical studies were made at the department of Dr. J. E. Moore, Dr. C. F. Mohr and Dr. F. W. Reynolds, with these results:

Sedimentation rate 35 mm. per hour.

Hemoglobin 13.0 G.; hematocrit 42.1; WBC 5450; differential WBC juveniles 7; polymorphonuclears 53; eosinophiles 5; lymphoc. 31; monoc. 4; urinalysis completely normal.

Stool cultures were negative for enteric pathogens, and microscopic examinations of the feces were negative.

Sero-diagnostic tests were done and gave the following results:

Wassermann doubtful; Kahn positive; Eagle positive (titer 1 unit); Mazzini doubtful. Specimen sent to Dr. Neurath of Duke University showed the blood negative with Kahn, Kline, Mazzini and cardiolipin tests.

Spinal fluid was entirely negative. Heart was normal in size and shape by X-ray and fluoroscopy; circulation time was normal. Electrocardiogram showed no abnormalities.

Agglutination for B. abortis was positive in a di-

*Read before the Medical Society of Northern Virginia, at Front Royal, Va., August 13, 1946.

lution of 1 : 320. Brucella fixation skin test was positive.

Two months later, the serologic reactions showed Eagle doubtful; quantitative no unit; Kahn doubtful; Mazzini positive; Wassermann negative.

A recent re-check (October 1946) showed the conventional tests positive again, but with a new cardiolipin antigen the serologic test was entirely negative.

These findings led to the conclusion that here is one of the most persistently positive biologic false tests. It seems likely that the cause of the persistently positive serologic tests may be chronic brucellosis, although it is unusual for any syphilitic reagin to be present in the blood over a period of seven years. The markedly positive agglutination can best be explained by the fact that the acute illness of last January was an acute flare-up of chronic brucellosis, and added strongly to the agglutination titer in the blood-serum.

The clinical facts about brucellosis are known; very often no other symptoms except weakness can be found. Because of the chronic condition even the agglutination test did not prove helpful in former examinations. Only the acute flare-up led to the exact diagnosis.

The persistency of the biological false positive test was significant and led almost to a wrong conclusion. These false tests are known in more than 10% of cases in leprosy, malaria, infectious mononucleosis, smallpox vaccination, relapsing fever and atypical pneumonia. Recent reports showed a false test in 20 of 100 cases with simple nasopharyngitis. Fluctuations of the serologic titer in false positive reactors make the diagnosis still more difficult.

Although post-infectious positive reactions occasionally last as long as three months, most become negative within a few days or weeks. Transient false positive reactions may occur in apparently normal persons without recent illness, as found in many examinations for the Selective Service. Persistently positive reactions may occur in non-syphilitic patients over many years, but a length of 7 years as in this case is unusual. But there are not many so eminently chronic diseases as undulant fever is.

Many of these cases with positive reaction have been mistakenly diagnosed and treated as latent syphilis. The psychologic, social and legal consequence to the individual may be serious. While many false positive tests will be revealed as transient during a test-period of at last 3 months, there is no verification test available today to help in the diagnosis of those which remain positive.

For the practicing physician remains only one thing: repeat the serologic test at intervals and, if possible, use a quantitative flocculation test as the increase or decrease of the titer is of diagnostic importance. In the biologic false positive cases the titer will be fairly low, usually not exceeding 60 to 100 units, and will show a tendency to decrease in repeated tests, pointing towards a negative result. However, in the case of syphilis the titer may be higher than 100 units and tend to rise for a period of many months and remain at high levels of 200-300 units. In the biologic false positive cases this titer will never be higher than 5 to 50 units after several weeks.

Our old belief in the infallibility of the serologic tests has been shaken, and we have to adjust our knowledge to these recent developments.

SIMPLIFIED RUBIN TEST TECHNIQUE

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There are two approved methods of performing Rubin's test for determining the patency of Fallopian tubes, and both of them have objectional features.

The method in which x-ray-opaque solution is used involves x-raying the patient, which is not convenient in many operating rooms. It also involves some danger to the patient and adds to the expense of the examination.

The second method, in which air or oxygen is used, is unsatisfactory to the beginner particularly, and rarely definite to the experienced unless air is found under the diaphragm by x-ray or assumed to be there by painful sensations. For a beginner particularly, it is very difficult to state positively that air bubbles heard with a stethoscope are coming through the Fallopian tubes and not leaking through the cervical canal.

The following technique has been used with complete satisfaction for the past five years, and seems fool-proof, and very simple. The apparatus must be air-tight. This is proven by occasionally submerging the apparatus in water and checking for leaks. The patient is either given anesthesia, or not, depending on the surgeon. It can be done either way. The tenaculum is applied and cannula inserted in the usual manner. The cervix is then depressed with the tenaculum and the vagina is filled above the level of the cervical os with a sterile solution, either water, saline, or antiseptic. Air is then pumped into the apparatus and manometer reading taken. If there is a fall in manometer reading, you know the air is going somewhere. If there is no leak in the apparatus and manometer reading falls, then the tubes must be patent since any leakage around the cervical os can be readily detected by bubbles escaping through the solution. Consequently, if no bubbles are seen as the manometer reading falls, then the tubes are patent.

Electric Power Building.

Headaches Relieved.

Sodium amytal, a sedative, will relieve such symptoms as headache resulting from tension or anxiety within one to five minutes when injected into the veins, according to three New York doctors writing in the current issue of the *Archives of Neurology and Psychiatry*, published by the American Medical Association.

The authors—Capt. Samuel Susselman and Capt. Fred Feldman, Medical Corps, Army of the United States, and S. Eugene Barrera, M.D., Albany, N. Y. —state that when symptoms are persistent and no organic cause can be discovered, the patient should receive an injection of sodium amytal. They claim that this sedative is of diagnostic value because it is a quick method of separating symptoms of organic disease from tension symptoms.

In more than 80 patients, treated over a period of nine months, the hospitalization period was shortened for many because of the use of this sedative.

"The patient in whom the test is clearly successful will have no residuum of distress but will express, often spontaneously, great relief and complete freedom from pain and a feeling of well-being," according to the physicians. They state that "this rapid lifting of discomfort is especially impressive to both patient and physician in cases of long-standing headache, which have remained unrelieved for months, or even years."

The authors point out that not only will this sedative relieve symptoms due solely to tension but it also will bring relief to patients with organic disease whose symptoms have been intensified by tension and anxiety.

THE FORUM

Is Partial Gastrectomy Desirable in the Treatment of Duodenal Ulcer?

TO THE EDITOR:

I read with great interest the guest editorial in the December 1946 issue of the VIRGINIA MEDICAL MONTHLY by Dr. Walter L. Palmer, Professor of Medicine, University of Chicago School of Medicine. Dr. Palmer is, of course, a gastro-enterologist of national standing and a man of wide experience in duodenal ulcer. A challenge of his opinions is somewhat bold.

I am not alone, however, in feeling that his conclusion, even though expressed as a prediction only, is a little too positive in the present state of our knowledge of vagotomy. As he himself points out, the operation of gastro-enterostomy for a good many years was considered "quite satisfactory", and now we know that it is not. The experience with vagotomy in any large group of cases is less than three years old. At the present time we are in the bandwagon stage of this operation, but even now cautious surgeons and internists are mounting the bandwagon with increasing reserve.

In considering vagotomy it must not be forgotten that we are depriving almost the entire gastro-intestinal tract of its parasympathetic supply. The ultimate result over years is not yet known; and it is quite conceivable that functional disturbances of moment may develop which are not yet foreseen. In our own small series of cases there have already been three instances of acute cardiospasm.

No surgeon is content with the results of any surgical procedure so far devised for the recalcitrant ulcer. As Dr. Palmer points out, however, the numerical disadvantage to ulcer patients as a whole is minor. Only about 10 percent of ulcer cases ever reach the surgeon. If the incidence of recurrent ulcer after partial gastrectomy is 8 per cent, that means that only .8 per cent of ulcer patients are really troublesome cases. The evidence concerning recurrence of ulcer after vagotomy is not yet complete. In our series there is one case of such recurrence. If in a large series after several years the recurrence rate is below the 8 per cent that Dr. Palmer quotes, then vagotomy obviously has an advantage in this important particular over partial gastrectomy.

In a recent discussion of the subject before the Southern Surgical Association, Dr. Frank H. Lahey asked for a conservative approach to this problem. He suggested further that the operation for the time being be limited entirely to cases without evidence of obstruction in order to disassociate the effects of vagotomy from the additional factor of a gastro-enterostomy. This seems to be a wise suggestion in our present stage of knowledge. On the other hand, Dr. Palmer speaks of vagotomy combined with posterior gastro-enterostomy as though it were an established procedure.

It appears to at least one surgeon that Dr. Palmer has rather cavalierly dismissed an operation, subtotal gastrectomy, which, although obviously not perfect, has brought permanent relief to an overwhelmingly large number of those subjected to it and has left as the ultimate duodenal ulcer problem only the most difficult of all cases. I would not challenge his statement that vagotomy may be the solution in this group, but I would suggest that too positive conclusions are not yet justified. It will be extremely unfortunate if vagotomy becomes soon so popularized that patients demand it even when surgical judgment is against it. The immediate relief of pain that occurs following vagotomy will make such popularization easy. Dr. Palmer's remarks are, of course, addressed only to the medical profession. They would, however, lead the casual medical reader to conclude that vagotomy is a definitely established procedure which has permanent value. This we certainly do not yet know.

EDWIN P. LEHMAN, M.D.

Charlottesville, Virginia
January 4, 1947.

TO THE EDITOR:

Thanks ever so much for your letter of January 9th enclosing Dr. Lehman's letter of comment on my guest editorial entitled: "Is Partial Gastrectomy Desirable in the Treatment of Duodenal Ulcer?"

Dr. Lehman's comments are of great interest. He is quite right in warning against the over-popularization of vagotomy. The ultimate result of the procedure over the years is not yet known. It is conceivable that untoward functional disturbances may develop. My own opinion, based upon the admittedly limited evidence to date, is that they will

not be as frequent or as troublesome as those occurring after subtotal gastrectomy.

It will be recalled that vagotomy and posterior gastroenterostomy were advocated only as more desirable than subtotal gastrectomy for so-called "intractable" duodenal ulcer. Dr. Lehman very correctly deduces that I do not like subtotal gastrectomy. Perhaps this is because I have been unduly impressed by the difficulty in dealing with the recurrent ulcers and the occasional reflex or functional disturbances.

It must always be remembered that the great majority of patients with duodenal ulcer can be treated satisfactorily by medical measures alone. The frequency with which surgical treatment is indicated is, to a considerable extent, a matter of opinion and hence no reliable figures are available. My own opinion is that operation is desirable in less than 10 per cent of all patients with duodenal ulcer. In this group, vagotomy and posterior gastroenterostomy seem to me preferable. If jejunal ulcers develop, they are more amenable to medical measures than are those recurring after subtotal gastrectomy and, if necessary as a last resort, a subtotal gastrectomy could still be performed!

WALTER L. PALMER, M.D.

Chicago, Illinois
January 17, 1947.

Poison Honey.

We are inclined to believe that anyone who gets sick after eating honey has just had too big a bait, and we overlook the fact that honey may contain a serious poison.

A few years ago an early drought caused a shortage of honey producing plants to one old and experienced bee keeper. Mountain Laurel (generally called Mountain Ivy here) was about all his bees had to work on. This honey was declared good by a state gathering of bee men, despite the fact that the owner himself got sick on it before selling any. Later some half a dozen people became sericusly ill. The symptoms were the same in all. Fortunately vomiting was one early symptom or probably all would have died. There was a slow pulse and very weak at the wrist. One old gentleman of 75 had a pulse rate of 30 and heart sounds so weak they could hardly be heard and pulse so weak it could hardly be counted. He was found lying on the floor, unconscious and vomit all around him. The pulse rate of younger patients was about 35.

Laboratories could not confirm the poisonous natures of this honey due to lack of facilities, but it was generally conceded to be Laurel (or Ivy) poison. Stock that eat ivy during big snows get sick the same way and sometimes die.

Probably a dry Spring may be the time to watch closest for poison honey due to Laurel (Ivy).

A. B. GRUBB, M.D.,
Cripple Creek, Virginia.

Isolation of Polio Virus.

Successful isolation of what they believe to be nearly pure polio virus has been accomplished by two Stanford University scientists, Dr. Hubert S. Loring and Dr. C. E. Schwerdt. Laboratory tests, including photographs taken through an electron microscope, indicate that the isolated virus is 80 per cent pure or better.

The experiments, carried on in the Department of Chemistry laboratories at Stanford, were financed by the National Foundation for Infantile Paralysis, sponsors of the annual March of Dimes drive, from funds allocated to research on polio.

Production of purified virus is seen as an important step in the long and to date unsuccessful laboratory struggle to produce a vaccine effective against poliomyetitis.

Now that a virus which is relatively pure is available, the experimental door is open, Dr. Loring pointed out, to render the pure virus non-infectious by chemical or physical treatment, and, the scientists hope, to produce a concentrated vaccine free of the impurities which have plagued previous polio vaccine experimenters.

He cautioned against any conclusion that isolation of the pure virus will lead necessarily to production of a successful vaccine against polio, and stated that a long and exacting experimental path lies ahead of scientists seeking this vaccine.

According to the Stanford scientists, one of the contributions to the knowledge of polio which has resulted from this work is that scientists now know what the virus looks like, know how big it is, and what its chemical characteristics and properties are.

PUBLIC HEALTH

J. L. ROPER, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for December 1946, as compared with the same month in 1945, and for the period of January through December, 1946, compared with the same period in 1945, follows:

	Dec. 1946	Dec. 1945	Jan.-Dec. 1946	Jan.-Dec. 1945
Typhoid and Paratyphoid	7	8	123	170
Diarrhea and Dysentery	151	112	2,711	7,102
Measles	228	238	13,443	1,625
Scarlet Fever	193	456	2,724	4,246
Diphtheria	50	98	551	577
Poliomyelitis	11	6	142	335
Meningitis	12	10	204	215
Undulant Fever	9	2	70	32
Rocky Mountain Spotted Fever	0	1	92	99
Tularemia	20	9	77	50

WHOOPING COUGH

Examination of medical records and death certificates will readily show the frequent complications and number of deaths from whooping cough, the latter being found most concentrated in the under-two-year group. In many cases, while no open sign is present, the disease has affected body cells predisposing to later illness and disability.

The attention of the profession is therefore respectfully directed to the use of human and rabbit hyper immune anti-sera, available for prevention and therapeutic use. This biological is passive and temporary in action and is indicated for the non-immune with history of recent exposure, or for those who are in the early stages of whooping cough. Use beyond the second week is questionable, but may be tried if necessary with increased dosage. Usually one dose is sufficient for prevention unless exposure occurs ten days after injection. One or two doses will suffice for treatment except for advanced cases.

Satisfactory response to treatment should manifest itself in lessened numbers and intensity of paroxysms, and lower and shorter febrile reaction. Anti-pertussis serum is given intra-muscularly in concentrated form with dosage of about 3 c.c. Allergic reaction to the human serum is practically nonexistent, and rare with the rabbit serum. In the latter instance, rabbit sensitivity should be checked. Children who have been previously immunized should receive booster doses of concentrated pertussis vaccine. The serum may then be used if whooping cough develops.

At the present time the State Department of Health does not stock any make of anti-pertussis serum, but may do so in the near future. The biological may be secured through any of the following:

Children's Hospital Serum Exchange, Philadelphia, Pennsylvania
Human serum—unconcentrated—20 c.c. dose

Cutter Laboratories, Berkeley, California
Human serum—concentrated

Ayerst McKenna Harrison, New York City, N. Y.,
Rabbit serum—concentrated

Wyeth Laboratories, Baltimore, Maryland
Rabbit serum—concentrated

New Wyeth Reference Booklet.

Wyeth Incorporated, Philadelphia, has just published "Therapeutic Agents of Special Merit", a handy new reference booklet for the busy doctor. "Therapeutic Agents of Special Merit" has been designed to provide the doctor with clear, concise and accurate information about selected Wyeth therapeutic agents, which by reason of their merit and widespread use, have proved to be helpful to the general practitioner as well as the specialist.

Each therapeutic product is illustrated and fully described, pointing out what it is, how used and how supplied. Copy has been held to a minimum. Only essential facts about each product are given. Additional clinical and laboratory data on the agents listed are available on request.

Included are convenient table of contents, and a comprehensive medical cross index.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President — MRS. J. E. HAMNER, Petersburg
President-Elect — MRS. J. L. DECORMIS, Accomac
Recording Secretary — MRS. M. H. HARRIS, West Point
Corresponding Secretary, MRS. MEADE EDMUNDS, Petersburg
Treasurer — MRS. REUBEN SIMMS, Richmond
Editorial Chairman — MRS. E. HOLLAND TROWER, Eastville

Auxiliary News.

NORTHAMPTON-ACCOMAC

The first meeting of the New Year was held on January 14th at the home of Mrs. J. Walker Jackson at Machipongo. There were twenty-two members and one guest present. A delightful luncheon and social period preceded the business meeting at which the president, Mrs. B. N. Mears, Belle Haven, presided. Mrs. John R. Hamilton, Nassawadox, was appointed chairman of *Hygeia* for 1947. Mrs. J. L. DeCormis, Accomac, president-elect of the State Auxiliary, gave a report on the State Convention at Virginia Beach and the Auxiliary to the American Medical Association in Chicago. She then presented the silver vase attendance trophy to the Auxiliary. As they had won it for five times, it now becomes their property. It was voted that the vase remain with each president during the term of her office. Mrs. Rooker J. White, Keller, chairman on legislation, gave a timely and interesting talk on legislative matters, following which the meeting adjourned. The April meeting will be at the home of Mrs. G. L. Fosque, Onancock.

CATHERINE RUSH TROWER (MRS. HOLLAND),
Chairman, Press and Publicity.

RICHMOND

The annual Christmas party of the Richmond Auxiliary was held on December 13th. This was under the direction of the following members: Mrs. George Welchons, Mrs. Thomas Wheeldon, Dr. Matilda Chalkley, Mrs. Walter Rein, Mrs. A. F. Bagby, and Mrs. Benjamin Sheppard. Members brought toys which were donated to the Crippled Children's Hospital.

MYRTLE G. MORTON (MRS. W. R.).
Publicity Chairman.

Floral Eponym (47)

CLUSIA

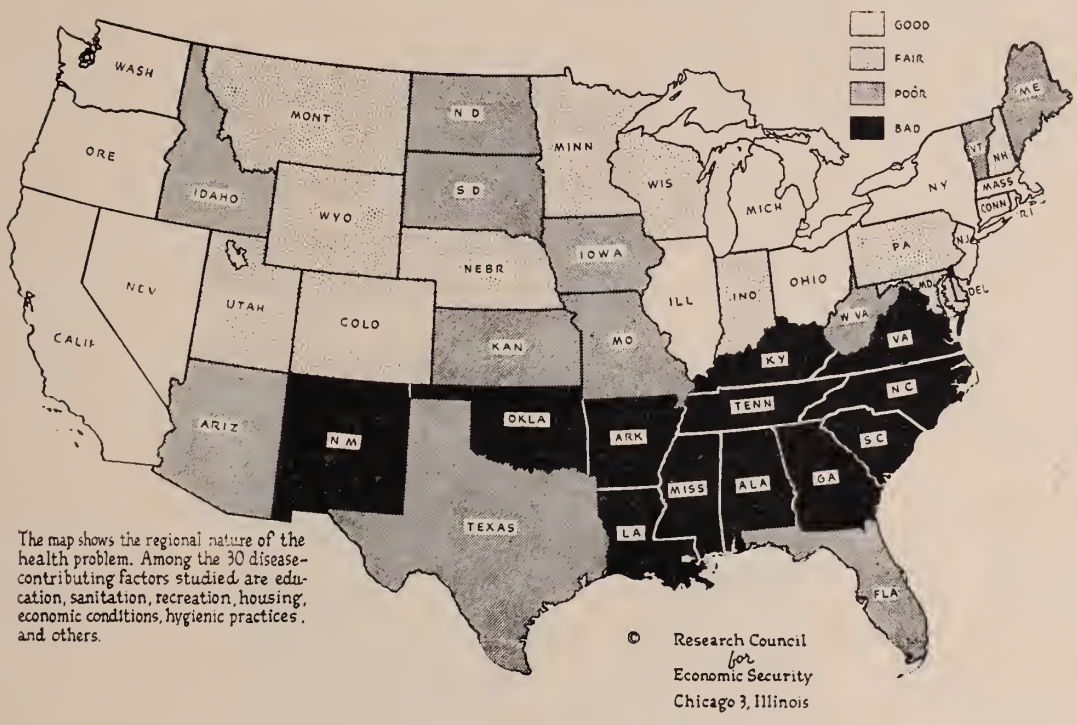
CHARLES DE L'ECLUSE, 1526-1609

CHARLES DE L'ECLUSE, or the Latinized Clusius, was a well-born Belgian who studied at Louvan, Marburg and Wittenberg. In the last he became acquainted with Melanchthon, the theologian. In 1850, Clusius came to Montpellier where his studies took a new direction under William Rondelet, a renowned physician and scientist. He graduated in medicine in 1553. He was physician to Maximilian II and Rudolph II and court botanist in Vienna. He broke many bones in his many botanical excursions and was a cripple when in 1593 he was called to his final post in Leyden. He was considered the greatest botanist of the 16th century.

Clusia is a genus of trees and shrubs found principally in Central and South America. Many are epiphytic climbers, the stems enveloping and ultimately smothering their hosts. Some, such as *C. rosea,* yield medicinal resins.

EDITORIAL

Our National Health Problem



The map shows the regional nature of the health problem. Among the 30 disease-contributing factors studied are education, sanitation, recreation, housing, economic conditions, hygienic practices, and others.

Infant Deaths in Virginia

INFANT mortality is considered one of the best criteria of efficient health service. It reflects the economic status and hygienic intelligence of the population, the character of the milk supply and to a lesser extent the water supply and the effectiveness of the control of infectious diseases as does no other single factor. The weakness of this measuring rod of public health efficiency is that its accuracy depends on the perfect recording of births, since the rate is based on the number of live births. Suppose, for instance, a community, with a rate of 59 per 1,000 live births, fails to record 10 per cent of its births (a not uncommon happening), the rate in that case would be 65.5 instead of the actual 59.

According to *Vital Statistics of the United States, Part II,* 1940 of the U. S. Census there were in the United States 47 deaths of infants under one year of age per 1,000 live births. At the same time Virginia had a rate of 59. Forty states had a lower rate than Virginia. The highest rate, 100, was in New Mexico and the lowest rate, 33, occurred in Oregon and in Minnesota. Virginia's rate is too high and her rank among the States is too low. Only seven States (Alabama, Arizona, Colorado, Louisiana, New Mexico, South Carolina and Texas) had a higher rate. One's first impulse is to blame the poor showing upon the negro population, but a glance at the figures shows that there is no close correlation between the infant deaths and the percentage of non-white population. Virginia with 24.7 per cent non-whites had an infant death rate of 59, whereas, Mississippi with 49.3 per cent non-whites had an infant mortality of only 54. Colorado with a non-white population of only 1.5 per cent had an infant mortality rate of 60 and New Mexico with 7.4 per cent non-whites had 100 infant deaths per 1,000 live births.

It is gratifying to record that in 1945 Virginia's rate fell to 48.5, but in the nation as a whole there was also a fall in the infant mortality. The rate for the United States for 1944, which is the latest available figure, was 39.8. It might be of interest in this connection to note that since 1936, when the first well-baby clinic was established in Virginia, public interest has grown until now there are 139 such clinics. In October 1942 arrangements were made to hospitalize babies needing hospital care, when such care was beyond the means of the family. During 1945-46 three hundred and two babies were hospitalized. The average stay in the hospital was 14 days and the average cost was $81.46.

John William Preston, M.D., 1867-1947

THE news of the unexpected death of Dr. John William Preston at his home on January first, came too late to put more than a notice in the January MONTHLY. Most doctors now practicing in Virginia remember with pleasure Dr. Preston's kindly welcome at the beginning of their professional life when they took the "Board". For more than thirty-three years he has worked untiringly to elevate, and to keep elevated, the professional standards in our State. Not only has his official work on the Medical



JOHN WILLIAM PRESTON

Examining Board of Virginia been invaluable, but his life and professional conduct have been a beautiful example of what a doctor ought to be.

Dr. Preston was born at Glade Hill in Franklin County, Virginia, December 13, 1867. He received his pre-medical training at Milligan College, Tennessee, and graduated in 1893 from the College of Physicians and Surgeons of Baltimore, which in 1915 merged with the University of Maryland School of Medicine to become the University of Maryland School of Medicine and College of Physicians and Surgeons. He studied further at the University of Pennsylvania, the University of London and

in Germany. He began practice in the Pocahontas coal fields at Keystone, West Virginia, but in 1908 he moved to Roanoke, Virginia, where his talents were soon recognized. In 1913 Dr. Preston was appointed to membership on the Medical Examining Board and in 1917 he became secretary of the board, a position he held until his death.

Dr. Preston was always active in legislative matters pertaining to the practice of medicine. For many years he was a member of the Legislative Committee of the Medical Society of Virginia, and when he was not on the Committee he cooperated actively with that important group. In 1927 at its Petersburg meeting, the Medical Society of Virginia elected him its president. It was in his term of office in 1928 that postgraduate instruction was begun—a project that eventuated into the Department of Clinical and Medical Education. This facility was not confined to the members of the Medical Society of Virginia, but was made available to all doctors regardless of color.

Dr. Preston was active in local affairs as well as in the State Society. He was a member of the board of directors of the Roanoke Hospital and served as chief of its staff in 1925. He was a past chairman of the Virginia section of the American College of Physicians, and a diplomate of the American Board of Internal Medicine. He was also a Mason and a member of the Shrine, and a deacon and elder in the Presbyterian Church. During World War I he served as a member of the Virginia Medical Advisory Committee.

Dr. Preston is survived by his wife and two daughters.

SOCIETIES

Albemarle County Medical Society.

At the meeting of this Society on January the 2nd, the following were elected as officers for the ensuing year: President, Dr. J. Edwin Wood, Jr.; vice-president, Dr. W. Roy Mason; and secretary-treasurer, Dr. C. Marshall Lee, Jr., all of Charlottesville.

Fredericksburg Medical Society.

At the December meeting of this Society, the following were elected officers for the ensuing year: President, Dr. L. A. Busch; vice-president, Dr. N. Talley Ballou; secretary-treasurer, Dr. James G. Willis. All are of Fredericksburg. Dr. D. W. Scott was elected to membership and Dr. C. W. Sale was reinstated after having been retired from the armed services.

Lynchburg Academy of Medicine.

The Academy met at the Lynchburg General Hospital on January 6, at which time new officers for 1947 were installed as follows: President, Dr. F. Read Hopkins; president-elect, Dr. Harold Riley; vice-president, Dr. Eugene S. Groseclose; and secretary-treasurer, Dr. Robert H. Cox. Two new trustees are Dr. Joseph Houck and Dr. Harvey C. Brownley. All officers are of Lynchburg. Dr. Frank F. Ellis and Dr. Lewis F. Somers of Lynchburg, and Dr. Ashby Coleman of Altavista were elected as active members and Dr. C. R. Titus of Bedford was elected to associate membership.

At this meeting, an interesting paper on Perforated Peptic Ulcer was presented by Dr. Joseph Houck.

Richmond Academy of Medicine.

The following officers were installed at the January 14th meeting of the Academy: President, Dr. Douglas G. Chapman; president-elect, Dr. E. T. Gatewood; vice-presidents, Dr. Charles L. Outland and Dr. H. J. Warthen, Jr.; and recording secretary, Dr. Henry St. George Tucker, Jr. Mrs. Mary N. Godbold continues as executive secretary-treasurer.

Roanoke Academy of Medicine.

At the regular meeting held on January 6th, the following program was presented: Leiomyosarcoma of the Stomach with Case Report by Dr. George S. Bourne with X-Ray Interpretation by Dr. Charles D. Smith; Infectious Polyneuritis by Drs. Edwin J. Palmer and R. Earl Glendy; and Importance of Early Diagnosis of Several Orthopedic Conditions by Dr. E. R. Troxler.

Rockingham County Medical Society.

New officers for this Society, who assumed office the first of the year, are: President, Dr. Galen G. Craun of Harrisonburg, and secretary-treasurer, Dr. B. W. Nash of Timberville.

Warwick County Medical Society.

At the meeting of this Society on December the 19th, the following were elected officers for 1947: President, Dr. Emanuel Greenspon; vice-president, Dr. W. A. Mitchell; and secretary-treasurer, Dr. William H. Woodson. All are of Newport News.

Virginia Peninsula Academy of Medicine.

Dr. J. Grafton Love of the Mayo Clinic, Rochester, Minn., addressed the Academy at its meeting on January 20 at Newport News. His topic was Protruded Intervertebral Discs: Their Role in Intractable Pain and Paralysis—Diagnosis and Treatment. Dr. John M. Meredith of Richmond and Dr. James L. Thomson of Norfolk were present and each discussed Dr. Love's paper.

Eighty physicians registered attendance at this meeting. Dr. Robert H. Wright, Phoebus, is president of the Academy, and Dr. Chester D. Bradley of Newport News, secretary-treasurer.

NEWS

Are You a Fellow?

The American Medical Association is going to celebrate its centennial in Atlantic City, June 9-13, 1947. Elaborate plans are being made for this celebration.

Only Fellows and Invited Guests are eligible to attend. Membership in your state society is the primary qualification for Fellowship. Fellowship dues and subscription to *The Journal of the A.M.A.* are both included in one annual payment of $8.00, which is the cost of *The Journal* to subscribers who are not Fellows.

If you are not a Fellow and plan to attend the Atlantic City session, which will be a milestone in medical history, you can save yourself considerable time and confusion when registering, if you will *write now* to the American Medical Association, 535 North Dearborn Street, Chicago 10, and ask if you are eligible to become a Fellow.

Personnel Changes, State Department of Health.

Effective December 16, 1946, Amherst and Campbell Counties were joined to Charlotte County, creating the Amherst-Campbell-Charlotte Health District, with headquarters at Rustburg. The Health Officer is Dr. S. S. Shouse.

Effective December 16, 1946, Fauquier County was joined to Prince William and Stafford Counties, creating the Fauquier-Prince William-Stafford Health District, with headquarters at Manassas. The Health Officer is Dr. J. W. Still.

Effective January 1, 1947, Caroline County was joined to Hanover County, creating the Hanover-Caroline Health District, with headquarters at Ashland. Dr. J. D. Hamner, Jr., is the Health Officer.

Effective January 1, 1947, Dr. Linwood Farley was appointed Health Officer of the Augusta County Health Department, with headquarters in Staunton.

Appointments to State Board of Medical Examiners.

Governor Tuck has just announced the following appointments:

Dr. Kenneth D. Graves of Roanoke for the unexpired term of five years, ending June 30, 1950, to fill the vacancy caused by the death of Dr. J. W. Preston; and

Dr. Chalmers Gemmill of Charlottesville for the unexpired term of five years, ending June 30, 1947, to fill the vacancy caused by the death of Dr. Lewis Holladay.

Married.

Dr. James Motley Booker, Lottsburg, and Miss Marilyn Scott, Cape Charles, January 11th. He is a graduate in medicine of the University of Virginia, class of 1941.

Dr. Jacquelin Marshall Harrison, Richmond, and Miss Alice Ridgely Fisher, Baltimore, Maryland, January 4th. He is a graduate of the University of Virginia, Department of Medicine, class of 1946, and is at present serving an internship at the Union Memorial Hospital in Baltimore.

Dr. Claude M. Lee,

Who returned from the mission field to his home in Charlottesville during the war, has resumed his work in China for a period of three years, and is

now at St. Andrew's Hospital, at Wusih, Kiangsu Province.

"Courage and Devotion Beyond the Call of Duty."

Through the cooperation of Mead Johnson & Company $34,000 in War Bonds are being offered to physician-artists (both in civilian and in military service) for art works best illustrating the above title, as applied to physicians in war and in peace.

This contest is open to members of the American Physicians Art Association and will be judged June 9-13, 1947 at the Atlantic City Session of the American Medical Association. For full details, write Dr. F. H. Redewill, Secretary, Flood Building, San Francisco, Cal., or Mead Johnson & Co., Evansville 21, Indiana.

Spring Graduate Course.

The Gill Memorial Eye, Ear and Throat Hospital, Roanoke, will hold its twentieth annual Spring Graduate Course, April 7th to 12th. All lectures will be held at the Patrick Henry Hotel, and operations and clinical demonstrations will be given at the hospital. The guest faculty includes Drs. A. J. Ballantyne, Glasgow, Scotland; Arthur J. Bedell, Albany; William P. Beetham, Boston; Eugene M. Blake, New Haven; E. B. Burchell, New York; Russell N. DeJong, Ann Arbor; Murdock Equen, Atlanta; William T. Hunt, Philadelphia; Chevalier L. Jackson, Philadelphia; Chester S. Keefer, Boston; Raymond E. Meek, New York; R. Townley Paton, New York; Lyman G. Richards, Boston; John R. Richardson, Boston; Bernard Samuels, New York; John M. Sheldon, Ann Arbor; C. R. Straatsma, New York; and O. E. Van Alyea, Chicago. Resident members are Drs. E. G. Gill; Gardner H. Landers; Robert M. Ferrell; Charles H. Dow; and James A. Campbell.

Dr. J. Arthur Gallant

Has returned from service in the U. S. Navy and resumed private practice in Richmond, with offices at 203 West Franklin Street.

News from the University of Virginia.

On January 6th, Dr. Fletcher D. Woodward, Professor of Otolaryngology, read a paper, prepared by Dr. Woodward and Dr. Thomas Holt, on the Use of Soluble Gauze (Oxidized Cellulose) in Otolaryngology, before the Southern Section of the American L. R. and O. Society, Miami, Florida.

Dr. Woodward made two talks on Infections and Tumors of the Maxillary Sinus before the Winter Postgraduate Course in Otolaryngology and Ophthalmology, Graduate School of Medicine, University of Florida, Miami, on January 7th and 8th.

West Virginia State Medical Association.

Due to the uncertainty concerning the date of the reopening of The Greenbrier at White Sulphur Springs, the Kanawha Medical Society has invited the West Virginia State Medical Association to hold the 80th Annual Meeting in Charleston. The Council has accepted the invitation and the meeting will be held in this city, Monday, Tuesday and Wednesday, May 12-13-14, 1947.

Error in Ciba-Medical Slyd-Rul.

Ciba Pharmaceutical Products, Inc., Summit, New Jersey, recently mailed to all physicians a handy slide rule for metric conversion. Since sending this out it has been found to contain an error in the computation—placement of decimal point of the conversion from 0.4 grain to gram. This should read 0.025 gram, not 0.25. A corrected paper table has been mailed which can be used temporarily.

Ciba regrets this error which causes doctors inconvenience and will replace the temporary slide with a new celluloid table as soon as possible.

Dr. B. B. Bagby, Jr.,

Formerly at Pine Camp Hospital, Richmond, is now Chief of Tuberculosis Service at the Newton D. Baker VA Hospital, Martinsburg, West Virginia.

News from Duke University, School of Medicine.

A month's course in Medical Mycology, under the direction of Dr. Norman F. Conant, is to be offered at Duke University School of Medicine and Duke Hospital, Durham, N. C., during July 1947. The course will be offered every day in the week, except Sunday, and has been designed to insure a working knowledge of the human pathogenic fungi within the time allotted.

Emphasis will be placed on the practical aspects of the laboratory as an aid in helping establish a diagnosis of fungus infection. Insofar as possible and as patients become available, methods of collecting materials in the clinic for study and culture will be stressed. Work with patients, clinical material, cultures and laboratory animals will serve as

a basis for this course. Also, an opportunity to study pathologic material, gross and microscopic, will be given those whose previous training would allow them to obtain the greatest benefit from a study of such material.

The number of applicants for the course will be limited and the applications will be considered in the order in which they are received. An attempt will be made, however, to select students on the basis of their previous training and their stated need for this type of work.

A fee of $50.00 will be charged for this course, upon the completion of which a suitable certificate will be awarded. Please direct inquiries to Dr. Norman F. Conant, Duke University School of Medicine, Durham, N. C.

Dr. Eugene A. Stead assumed his duties as Professor of Medicine at the Duke University School of Medicine on January 1, 1947, filling the professorship held by Dr. Frederic M. Hanes whose untimely death occurred last March.

As an experiment in graduate teaching, the Department of Anatomy is offering a review of anatomy on a graduate level using motion pictures, lantern slides, and other visual aids. This review is offered as a part of the speciality program in Neuropsychiatry and Orthopedics. The course is conducted as round table discussions with panels including staff clinicians especially interested in the region of anatomy under discussion.

Appointed Schering Director.

Mr. Francis C. Brown, President of Schering Corporation, Bloomfield, N. J., has announced the appointment earlier this year of Mr. Basil O'Connor as a new member of the Schering Board of Directors. Mr. O'Connor is Chairman of the American National Red Cross and President of the National Foundation for Infantile Paralysis.

Announcement of Mr. O'Connor's selection was made to executives, office and plant employees at the Schering Annual Christmas Party in the Grand Ballroom of the Hotel Pennsylvania, New York, December 21, 1946. An additional feature of the event was the presentation to Schering personnel of an annual bonus totaling more than $135,000, largest in the company's history and in keeping with Schering's policy of dividing profits with employees.

The new Schering director is well-known for his national public health and welfare activities. Mr. O'Connor was the former partner of the late President in the law firm of Roosevelt and O'Connor, and is now senior partner of O'Connor and Farber, of New York. In addition to chairmanship of the American National Red Cross and presidency of the Georgia Warm Springs Foundation, he is President of the National Foundation for Infantile Paralysis, and participates in a number of civic, legal and educational activities.

VA Mental Hygiene Clinic.

Plans for establishing a mental hygiene clinic in Richmond during the spring were announced in January by the Veterans Administration. Out-patient treatment will be available to veterans with service-connected psychiatric or nervous disorders.

Dr. C. T. Wilfong, who has been acting as manager of the VA'S Richmond Sub-regional office, will head the clinic. He also will be chief medical officer for the sub-regional office.

The clinic, VA officials said, will be in operation about the middle of February. Out-patient treatment will be available here for veterans who feel some psychiatric or nervous disorder. Officials feel that such treatment will effect an early cure in many cases and will thus obviate the necessity for hospitalization.

Treatment will be provided for veterans on leave or discharged from VA neuropsychiatric hospitals, if they have service-connected disability.

Dr. Wilfong's switch from manager of the sub-regional office to chief of the mental hygiene clinic and chief medical officer is in line with VA's policy of utilizing medical personnel for medical duties. Heretofore much of his time has been consumed with administrative duties of a non-medical nature.

A diplomate of the American Board of Psychiatry and Neurology, Dr. Wilfong has a long record of service with the Veterans Administration. He is a graduate of the medical college of the University of Louisville, and he served as a medical officer in World War I. He is a member of the American Medical Association, of the American College of Physicians, and of the American Psychiatric Association.

China's Determination.

Political unrest in China has not affected the determination of men and women in all walks of life in that country, particularly in the medical pro-

fession, to speed the task of reconstruction, according to Dr. Hu Shih, former Chinese ambassador to the United States and now president of Peking University.

The report of Dr. Hu, who is honorary president of the American Bureau for Medical Aid to China, one of the participating agencies of United Service to China, states that American aid for Chinese educational institutions has a "stimulating influence of immeasurable value."

"There remains in China today," Dr. Hu says, "the same strong spirit of patriotism, self-sacrifice and devotion to duty which carried us through the difficult war years. This is especially true among our professional classes, our teachers, doctors, welfare workers and public servants.

"A similar spirit is also prevalent among our medical students. A large number of them are preparing, not for private practice, but for public service. Their ambition is to see in their own generation the development of China as a medically self-sufficient nation.

"I am glad that ABMAC hopes, in 1947, to increase the number of fellowships for promising young men and women pledged to become medical teachers. Travel grants and the exchange professorship plan also fit into the picture. It is imperative that our older teachers, after long isolation of war years, have the opportunity to visit foreign schools and hospitals to catch up on techniques developed in the past ten years. The ABMAC plan to concentrate future aid on five or six medical schools also fits into the hopes of our medical leaders to see China possessed of medical schools worthy to be ranked with the best of other countries."

Death Among Doctors.

Death claimed approximately 3,558 physicians during 1946 as compared with 4,015 the previous year, according to the January 11 issue of *The Journal of the American Medical Association.*

On the basis of an analysis of 3,358 obituaries published in *The Journal* during the year, it was found that the average age at death was 66.1 as compared with 65.3 in 1945. The majority of the physicians—584—died between the ages of 70 and 74, the same age group that was dominant in 1945.

Heart disease remains the leading cause of death among physicians. Coronary thrombosis and occlusion accounted for 738 deaths (655 in 1945), 283 occurring between the ages 60 and 69. Cerebral hemorrhage, thrombosis and embolism accounted for 404 deaths; cancer and tumors were responsible for 352 deaths and pneumonia for 199. Tuberculosis caused 31 deaths, asthma 10, bronchitis and pleurisy five, and other diseases of the respiratory system 31.

The Journal finds significant the total of 55 suicides as compared with the 25 recorded for 1945. There were 130 accidental deaths, 55 of which involved automobiles.

The 3,358 *Journal* obituaries included 40 physicians who were killed in action during World War II and 128 who died while in military service. A number of those who were killed in action had first been reported missing in action. Eight physicians lost their lives in the Asiatic area, seven in the Philippine Islands, six in the China Sea, five in Germany, five in the Pacific area, two in Italy, two in France and one each in Formosa, Luzon, North African area, Okinawa and Tinian. Nine were reported as prisoners of war.

Since the outbreak of World War II on December 7, 1941 *The Journal* has recorded the deaths of 257 physicians who were killed in action and 501 who died while in military service. Reports still being received by *The Journal* indicate that the aggregate total of 758 military deaths among physicians will be greatly augmented when the complete statistics are made available through official military channels.

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A McCaskey cabinet of the type sold to doctors about twenty-five years ago. Write "McCaskey" care the MONTHLY, 1200 East Clay Street, Richmond 19, Virginia. (*Adv.*)

Wanted—

A young doctor for a junior partner. Country practice; good salary plus commission. Address "Doctor", care this journal, 1200 East Clay Street, Richmond 19. (*Adv.*)

OBITUARIES

Dr. Joseph Albert Abercrombie,

Prominent physician of Richlands, died January 11th following a cerebral hemorrhage. He was forty years of age and a graduate of Johns Hopkins University in 1930. Dr. Abercrombie was on the staff of Johns Hopkins Hospital for seven years and for two years during that time was assistant to the chief of neurosurgery. For the past ten years he had been connected with the Mattie Williams Hospital in Richlands where he specialized in brain and neurosurgery. Dr. Abercrombie was a member of the State Board of Health. He had been a member of the Medical Society of Virginia for ten years. His wife and two daughters survive him.

Dr. Thomas Benjamin Pearman,

Well known Richmond physician, died January 12th of heart disease, after an illness of two weeks. He was forty-nine years of age and graduated from the Medical College of Virginia in 1921. Dr. Pearman served as Richmond city physician from 1922 to 1934. He was considered an outstanding diagnostician and was a member of the staff of Grace Hospital. He was a Scottish Rite Mason and a member of Acca Temple and the Legion of Honor. Dr. Pearman had been a member of the Medical Society of Virginia for twenty-two years. His wife and two sons survive him.

Dr. John William Preston.

At the regular meeting of the Roanoke Academy of Medicine, on January 6, 1947, the following resolutions were adopted.

It is with regret that the Roanoke Academy of Medicine has learned of the death of Dr. J. W. Preston, which took place at his home here on the morning of January 1, 1947.

We wish to extend to his family our deepest sympathy. Not only will he be a great loss to his family, he will be a great loss to the Medical profession as a whole, to the State Medical Society and to this Society, where he filled many positions, from the president down, always to the very best of his ability. Kind, patient and thorough in all his undertakings.

It is hard to find words to express the love and esteem in which he was held by people in all walks of life who knew him.

Be it resolved that a copy of these resolutions be sent to his family, to the local paper and to the State Medical Monthly.

W. L. POWELL
W. R. WHITMAN
ALVAH STONE
Committee

Resolutions on Dr. Plunkett.

The Lynchburg Academy of Medicine wishes to acknowledge the loss of one of its oldest and most active members, Dr. Flavius Ogburn Plunkett, whose untimely death occurred December 18, 1946. In so doing the following resolution is offered:

BE IT RESOLVED that The Lynchburg Academy of Medicine wishes to express to the family of Doctor Plunkett their sincere sorrow in his untimely passing.

That the Medical Profession, particularly the specialty of Obstetrics and Gynecology, has suffered a tragic loss. From the beginning of his specialization, in which he was considered a pioneer in this community, he bent his every effort both mental and physical to the improvement of maternal and infant care, not only in this community but in the State and nation. In this capacity he served for many years as a member of the Maternal and Infant Welfare committee of the Medical Society of Virginia. His sincerity and devotion in his field of practice was unquestioned, and the welfare of the patient was never secondary to his personal feeling or gain.

The community has lost a very valuable and civic-minded citizen, whose interests were broad and who devoted a large part of his time to the welfare of indigent patients in the City Clinic and hospitals. He was largely responsible for the development and growth of the City and County Clinics for the needy.

BE IT RESOLVED that these resolutions be spread upon the minutes of this meeting, that a copy be sent to his family, and to the Medical Society of Virginia.

JAMES R. GORMAN, *Chairman*
EUGENE S. GROSECLOSE
SAMUEL E. OGLESBY
Committee

January 6, 1947.



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But now a careful histologic study has been made which reveals a startlingly high incidence of rickets in children 2 to 14 years old. Follis, Jackson, Eliot, and Park* report that postmortem examination of 230 children of this age group showed the total prevalence of rickets to be 46.5%.

Rachitic changes were present as late as the fourteenth year, and the incidence was higher among children dying from acute disease than in those dying of chronic disease.

The authors conclude, "We doubt if slight degrees of rickets, such as we found in many of our children, interfere with health and development, but our studies as a whole afford reason to prolong administration of vitamin D to the age limit of our study, the fourteenth year, and especially indicate the necessity to suspect and to take the necessary measures to guard against rickets in sick children."

*R. H. Follis, D. Jackson, M. M. Eliot, and E. A. Park: Prevalence of rickets in children between two and fourteen years of age, Am. J. Dis. Child. 66:1-11, July 1943.

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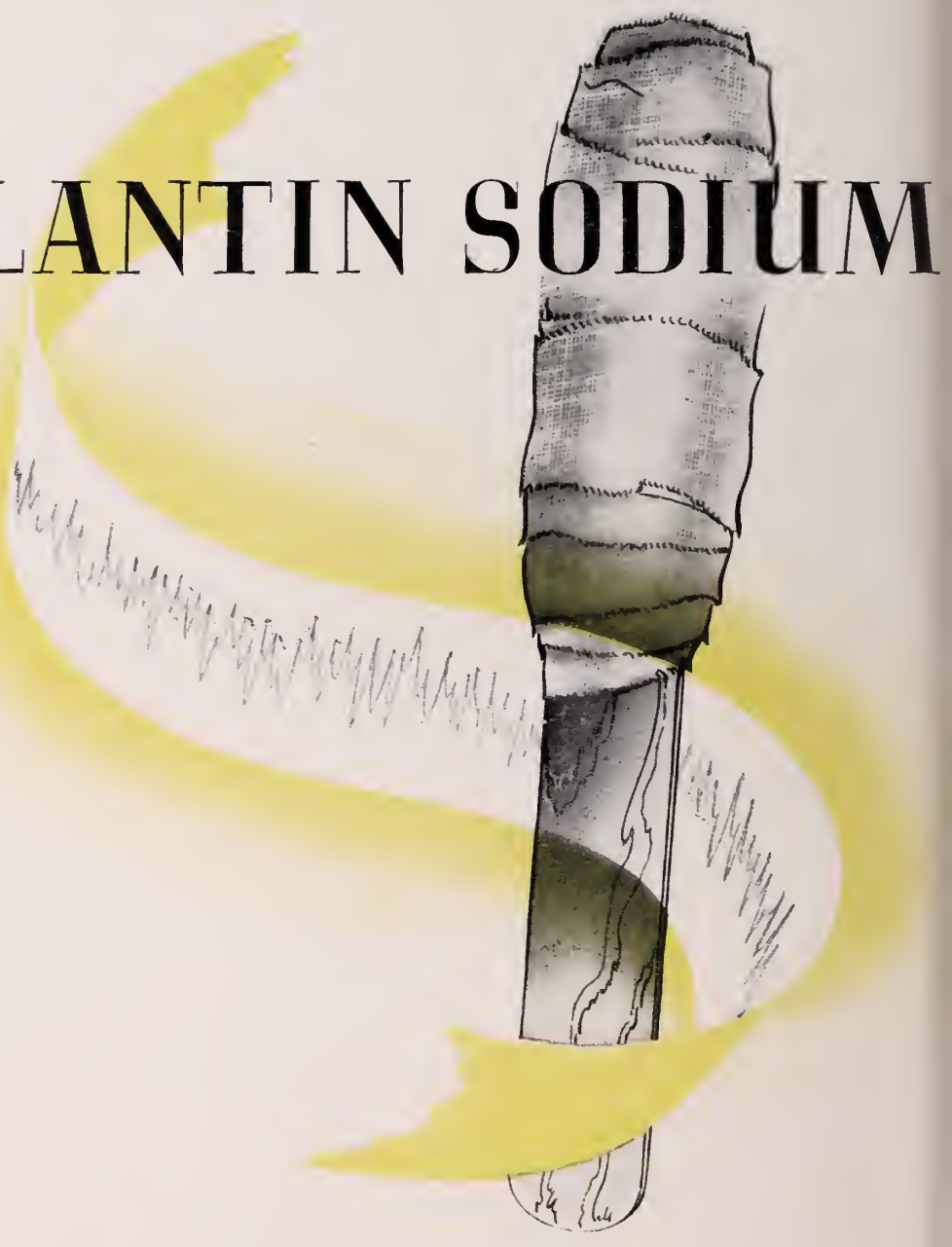
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SYMBOLS OF SIGNIFICANCE

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Virginia Medical Monthly

Vol. 74, No. 3.
WHOLE No. 1137.

RICHMOND, VA., MARCH, 1947

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THE SURGICAL TREATMENT OF BRONCHIECTASIS—ROLE OF PENICILLIN IN POSTOPERATIVE CARE*

M. L. White, Jr., M.D.,
Assistant Professor of Surgery, University of Virginia School of Medicine,
Charlottesville, Virginia.

Bronchiectasis is a serious disease of the lungs in which there has been a renewed interest, coincidental with the development of successful thoracic surgery during the last fifteen years. As with many other diseases for which there was no successful treatment, the interest in the condition formerly was manifested chiefly by pathologists whose demonstration of the striking postmortem changes made fascinating teaching material. There was little interest manifested by internists except in the rather easy recognition of the symptom complex of the advanced cases, and surgeons had no interest except in the treatment of the suppurative complications of the disease. The increasing success of the surgical treatment by ablation of the diseased segments of lung has led to a more accurate appraisal of the disease as to its etiology, its frequently bizarre symptom complex, its frequency, its pathology, and its very serious morbidity and mortality. We now know that it frequently masquerades under a multitude of mistaken diagnoses, most of which minimize the true seriousness of the condition. Many patients harboring the progressive and potentially deadly changes of bronchiectasis are lulled by such diagnoses as a simple bronchitis, sinusitis, "cigarette cough", repeated influenzal attacks and asthma.

It is the purpose of this paper to present briefly certain aspects of the disease and to elaborate on the surgical treatment, particularly the part that penicillin has played in the management of surgical cases. An analysis of the 55 pulmonary resections performed for bronchiectasis at the University of Virginia Hospital from September, 1942, to April, 1946, will be presented.

Pathology. An understanding of the pathology of bronchiectasis is a prerequisite to rationalization of the radical surgical treatment necessary for its cure. The underlying pathology consists of a dilatation and chronic infection of the bronchi, usually in the lower lobes, although in right lower lobe cases, the middle lobe is involved also in more than one-half of the cases, and in left lower lobe cases, the lingular segment of the left upper lobe is involved in a similar percentage. In our own series, 63 per cent of the right, and 62 per cent of the left lower lobe cases had involvement of the above mentioned adjacent lobes. Typically, there is a destruction of the mucosa, the submucosa, elastic and smooth muscle elements of the bronchial wall, with varying degrees of fibrous tissue healing.[6] A parenchymal infection usually exists, manifested by peribronchial pneumonitis only in the less active phase, and by extensive pneumonic consolidation in the acute exacerbations. It must be emphasized that the bronchial wall changes are of an *irreversible* nature—the elastic, the muscle, and the epithelial elements never regenerate to give normal physiological function.[6] The degree of infection present at any given time influences tremendously the clinical and the pathological pictures, but even with the characteristic remissions, the bronchial tree does not return to normal. With long standing disease, pulmonary fibrosis, emphysema, and pleural adhesions may be present, and may diminish pulmonary function to a crippling degree. Small contracted lobes, typical

*From the Department of Surgery and Gynecology University of Virginia School of Medicine and the University Hospital, Charlottesville, Virginia.
Presented before the Medical Section of the Virginia Academy of Science, May 10, 1946.

of advanced bronchiectasis, are due to extensive fibrosis of the parenchyma, and many such specimens removed consist primarily of large bronchiectatic cavities and surrounding scar tissue. As with any chronic suppurative process of long duration, amyloid disease may develop, although we have seen no proven cases during the time of the present study.

There is a type of "dry" bronchiectasis, bronchiectasis sicca, which does not harbor acute or subacute infection, but which pathologically consists of dilated bronchi with complete fibrotic healing. These cases do not present the usual clinical syndrome but will frequently present themselves with alarming pulmonary hemorrhages.

ETIOLOGY. It is not in the scope of this paper to discuss the many theories of the etiology of bronchiectasis. The most logical explanation from both a clinical and an experimental standpoint involves the fundamental pathological principle of infection in the obstructed portion of a partially or completely occluded hollow viscus. The nature of the original bronchial obstruction is not obvious in many cases, but there are many reasons to believe that the most common cause of bronchial obstruction is retained tenacious bronchial secretions.[2] The majority of the cases of bronchiectasis originate in childhood when pneumonia *per se* and the respiratory complications of whooping cough and measles are prevalent. These pulmonary infections produce mucoid or purulent secretions which are evacuated with difficulty through the small caliber system of bronchi, particularly when most children cannot be successfully urged to cough vigorously and prophylactically until the stimulus is great. The infection already present plus the bronchial obstruction may lead to rapid, irreversible changes characterizing bronchiectasis. Other causes of bronchial obstruction may be foreign bodies, intrabronchial tumors, large mediastinal lymph nodes, and bronchial strictures.

Another significant cause of bronchiectasis does not involve the bronchial obstruction mechanism. Chronic parenchymal suppuration, such as a lung abscess or tuberculosis, may initiate the changes of bronchiectasis in the bronchi draining the area of disease by the long exposure to contaminated secretions. The residual cough and expectoration following the healing of a pulmonary cavity, either tuberculous or non-tuberculous, is usually due to residual bronchiectasis.

ASSOCIATION WITH SINUS DISEASE. This topic is purposefully discussed as a separate entity. The etiological relationship of sinusitis and bronchiectasis is not clear. For years, the explanation of the coexistence of the two diseases lay in the fact that the post-nasal discharge from the sinuses entered the bronchial tree and, over a long period of time, initiated the changes of bronchiectasis.

Recently it has been proven by x-rays of the sinuses, following iodized oil bronchograms, that bronchial secretions evacuated by coughing readily enter the sinuses. Suffice it to say that the two diseases coexist usually in about 60 per cent of the cases of bronchiectasis,[9] although in our series the association was only in 38 per cent.

SYMPTOMS. The symptoms of bronchiectasis do not always fulfill the classical features depicted in the texts. We no longer wait for the extreme cough, abundance of foul sputum, and emaciation to suspect this disease. Cough may be mild and sputum scanty and mucoid in the presence of serious bronchiectasis. The degree of cough and expectoration depends upon the phase of activity of the infection. Pulmonary hemorrhage is a very common symptom[5]—in fact, bronchiectasis is the second most common cause of pulmonary bleeding (Table I). Forty-

TABLE I

SYMPTOMS

	Number Cases	*Percentage*
Pulmonary Hemorrhage	26	47.3
Pneumonia	33	60.0
Associated Sinusitis		
Severe—Requiring Operation	18	32.7
Mild—No operation	3	5.5
		38.2
Duration Symptoms	9 Cases—"All Life"	
	6 Cases—Under One Year	
	Average Duration 9.5 Years	

seven per cent of our patients had gross hemorrhages at some time during their illness. Episodes of pneumonia are common. These are really acute exacerbations of the pneumonitis associated with the disease. Chronicity of symptoms is marked in practically all cases. Our average patient had endured symptoms for 9.5 years before operation. There are occasional patients with minimal pulmonary symptoms and marked systemic symptoms such as malnutrition, arthritis, metastatic abscesses, unexplained fever and malaise. Three patients in our series had such symptoms and the true diagnosis

was discovered by iodized oil bronchograms for which there seemed to be little initial indication.

Although the disease is common in all age groups, most of the surgical cases fall into the younger decades between ten and thirty years (Table II).

TABLE II
INCIDENCE
(55 Cases)

Age

Years	*Cases*
0-10	5
10-20	19
20-30	14
30-40	11
40-50	4
50-60	2

Youngest—2 Years
Oldest—57 Years

Race

White ___ 52 (94.5%)
Colored __ 3 (5.5%)

Sex

Male ____ 19 (34.5%)
Female __ 36 (65.5%)

The sex disproportion of 36 females to 19 males is probably related to the greater sensitivity of the female to the social maladjustment caused by chronic cough and malodorous expectoration. The fact that only three cases in the series were in the colored race may have a similar explanation. Limited hospital facilities for the colored race played no part in this disproportion because no colored patients suitable for resection were turned away.

DIAGNOSIS. The diagnosis of bronchiectasis may always be suspected in any patient with chronic pulmonary symptoms, particularly when tuberculosis has been eliminated as a possibility. Plain chest films constitute the first step in accurate diagnosis but it must be recognized that the changes depicted by such films are extremely variable and, indeed, the films of patients having bronchiectasis may be reported by competent radiologists as being entirely normal. The most common plain film changes of bronchiectasis are due to the degree of peribronchial pneumonitis, or frank consolidation, present at the time of the x-ray. This pneumonitis is present usually in the lower lobes and in a minor degree is called "increased bronchovascular markings". Less commonly there are cystic areas, the so-called "ring shadows", which represent large cystic dilatations of the bronchi. The differential diagnosis of congenital cystic disease naturally enters the picture with such a finding. There may be small contracted lobes as delineated by thickened interlobar fissure lines, and many cases show pleural thickening as represented by obliteration of the costophrenic or cardiophrenic sulci or a ragged contour of the diaphragm.

Bronchoscopy is an aid in diagnosis but its limitations are marked. The state of the mucosa of the larger bronchi, the amount, character and origin of the secretions, and the presence of bronchial obstruction such as neoplasms, foreign bodies, inflammatory strictures and extrinsic pressures can be determined, but the diagnosis of bronchiectasis cannot be confirmed by bronchoscopy alone. Iodized oil bronchograms with adequate bilateral filling of all five lobes constitute the *only* way of making an accurate diagnosis of the disease and its extent.[3] The importance of filling the apparently uninvolved lobes is apparent when the selection of patients for surgery is discussed later.

PROGNOSIS WITHOUT SURGICAL TREATMENT. The prognosis of bronchiectasis victims is extremely poor. The morbidity is high from both a physical and mental standpoint. Recurrent episodes of pneumonia, frequent hemorrhages, increasing dyspnea, a frequently rest-disturbing cough, abundant foul expectoration, all cause a gradual deterioration of the patient. Empyema, metastatic abscesses, and pneumonia are the common causes of death. It has been reported that 38 per cent of bronchiectasis patients are dead within six years after the diagnosis is made.[7] Other reports[4] substantiate these figures and, if complete disability is included with the mortality figures, the salvage of reasonably well patients several years after diagnosis is extremely small. A consideration again of the pathological changes of the disease should not make this statement seem too radical.

CONSERVATIVE TREATMENT VS. SURGICAL TREATMENT. After the establishment of the diagnosis of bronchiectasis by bronchography, each case should be tentatively classified as a candidate for either medical (conservative) or surgical (radical) treatment. For conservative treatment are selected those patients with advanced bilateral disease, those in the upper age brackets or with other diseases rendering them unfit for operative treatment, and those with minimal disease and minimal symptoms. All others must be considered as candidates for radical treatment in the light of the present success of surgery and the poor prognosis without it. The conservative management will bring marked remission of symptoms in many patients, but unfortunately the remission is not lasting because the disease is *not*

cured. Postural drainage, multiple bronchoscopic treatments, courses of chemotherapeutic agents, both sulfonamides and penicillin, and correction of coexisting sinusitis, will bring improvement temporarily, particularly during the episodes of pneumonic flare-up. The bronchoscopic application of sulfonamide powders has brought disappointing results in most cases. The lately publicized aerosol containing an antibiotic is a much more logical method of applying drugs locally because of the longer lasting contact of the drug with the bronchial tree; but, in my opinion, this procedure also must be used only as a valuable adjunct in the conservative management of cases not suitable for surgery or in the preparation of patients for surgery.

To be emphasized is the fact that many advanced cases of bronchiectasis, obviously too ill for pulmonary resection when first seen, may be improved by the conservative treatment to such an extent that they become reasonable surgical risks.

It must also be mentioned that bilaterality of the disease *per se* does not always contraindicate resection. Advanced changes in one lung with minimal changes in the other may frequently be operated upon with good results. Also, with disease localized to one lobe (or perhaps one lobe and the adjacent portion of another lobe) in each lung, bilateral resections are possible and have been performed numerous times in some clinics.

SURGICAL TREATMENT. The operative treatment of bronchiectasis consists of ablation of diseased tissue by either segmental lobectomy, complete lobectomy, or total pneumonectomy. The collapse therapy advocated in the past is contraindicated.

The technique of pulmonary resection must be reviewed because the present study reports what we believe is an improvement in the generally accepted manner of operation and post-operative care. Anesthesia is maintained by a nitrous oxide-ether mixture administered by the closed intratracheal route. The surgical approach is postero-lateral with resection of an appropriate rib for exposure, and the pleural space is entered through the periosteal bed of the resected rib. The involved lobe or lung is mobilized by dividing the pleural adhesions and by developing the interlobar fissures. An attempt is always made to isolate individually the hilar structures and this is almost always possible in pneumonectomies. However, the incompleteness of the inter-lobar fissures renders individual isolation of the lobar hilar vessels and bronchi impossible in well over half the cases and a tourniquet amputation of the lobe must be performed, ligating en masse the hilar structures (Table III). Incomplete fissures are developed artificially by clamp division of the pulmonary tissue. When a true individual isolation technique can be accomplished, the vessels are triply ligated with heavy silk and the bronchus is closed with fine interrupted silk sutures in one layer. The tourniquet mass ligations are accomplished with a suture ligature of heavy silk, followed by individual ligation of vessels found in the hilar mass, and individual suture of the bronchi. With either technique the bronchial stump is always covered with a pedicle or free pleural graft. Sulfanilamide crystals (about four grams) are implanted in the pleural space and a layer closure of the chest wall with chromic catgut accomplished. Following pneumonectomy the pleura is never drained. Formerly a large tube used in the manner of a closed drainage was employed in all lobectomies, this drainage being maintained until expansion of remaining pulmonary tissue was complete and the inevitable empyema had been obliterated. With the advent of penicillin we felt that it would be permissible to close the chest completely and to depend on aspiration of the pleural fluid to maintain expansion of the lung with the intrapleural injection of penicillin to maintain asepsis. This practice has been thoroughly tested now and the results have been spectacularly improved.[8]

TABLE III

HILAR TREATMENT IN LOBECTOMIES

	Pre-Penicillin Group	*Penicillin Group*
	14 Cases	36 Cases
Tourniquet	11	16
Individual Ligation With Division Pulmonary Tissue	3	14
Clamp Resection	0	2
Individual Ligation	0	4
Division Pulmonary Tissue	100%	89%

Adequate blood replacement during the operation is essential. We have found by actual measurement that the average patient undergoing pulmonary resection loses 1500 to 1700 cc. of blood, and whole blood must be administered in equal amounts.[10] It is particularly important to anticipate the large loss and give blood upon beginning the operation. The greatest loss occurs usually within the first hour.

It is now our routine to inject 50,000 units of penicillin into the pleural space at the close of the operation, and daily thereafter for seven days. The pleural space is aspirated each day prior to the penicillin injection. The volume of fluid recovered diminishes from about 400 cubic centimeters on the first post-operative day to a few cubic centimeters at the end of one week, after which aspiration is rarely necessary. To facilitate the removal of the larger quantities of fluid during the first few days of acute post-operative discomfort, we have left a catheter in the pleural space through a minute intercostal stab wound, clamping the tube completely except at the time of aspiration. The tube is removed on the second or third post-operative day, and thoracentesis by needle is performed thereafter.

RESULTS. During the period of this study (September, 1942, to April, 1946), 267 cases of bronchiectasis were diagnosed in the University of Virginia Hospital (Table IV). Of these, 55 were treated by pulmonary resection; 50 by lobectomy;

TABLE IV

PULMONARY RESECTION FOR BRONCHIECTASIS

267 Cases Bronchiectasis Diagnosed

Lobectomies	50
Pneumonectomies	5
Total	55

Pre-Penicillin Series		*Penicillin Series*	
Lobectomies	14	Lobectomies	36
Pneumonectomies	0	Pneumonectomies	5
Total	14	Total	41
Deaths	0	Deaths	1
Mortality	1.8%		

and 5 by pneumonectomy. There were 14 lobectomies in the pre-penicillin series, and 36 lobectomies and 5 pneumonectomies in the penicillin series. There was one death among the 55 cases, a mortality of 1.8 per cent. This single death was a nine year old child with bilateral disease, who died of cardiac arrest caused by a vago-vagal reflex as her operation was being completed.

A comparison of the post-operative complications shows the real value of the use of penicillin (Table V). The 14 lobectomies in the pre-penicillin series show an incidence of 100 per cent empyemas; 57.1 per cent bronchial fistulae; and 14.3 per cent chest wall infections, whereas the 35 lobectomies in the penicillin series show an incidence of 5.7 per cent empyema and fistula with no wound complications. The five pneumonectomies in the penicillin series had no complications.

A similar contrast in the two groups is evident when the post-operative debility is studied (Table VI). The average post-operative day out of bed in the pre-penicillin series was 23.2, while the aver-

TABLE V

POSTOPERATIVE COMPLICATIONS

	Pre-Penicillin Group		*Penicillin Group*	
	Pneumonectomies	Lobectomies	Pneumonectomies	Lobectomies
	0 Cases	14 Cases	5 Cases	35 Cases
Bronchial Fistula	0	8 (57.1%)	0	2 (5.7%)
Empyema	0	14 (100%)	0	2 (5.7%)
Chest Wall Infection	0	2 (14.3%)	0	0

age day in the penicillin series was 9.0. Similarly, the average post-operative day of discharge was reduced from 32.8 to 20.1. The usual post-operative day out of bed is now the fourth and the day of discharge the fourteenth, but many of these patients were operated upon before the popularization of early mobilization, and thus the averages are much higher.

The two failures to prevent empyema and bronchial fistula in the penicillin series occurred in extensive resections, leaving a large dead space with the remaining pulmonary tissue bound to the pari-

TABLE VI

MORBIDITY

	Pre-Penicillin Series	*Penicillin Series*
Lobectomies		
Avg. P.O. Day out of Bed	23.2	9.0
Avg. P.O. Day of Discharge	32.8	20.1
Pneumonectomies		
Avg. P.O. Day out of Bed		10.2
Avg. P.O. Day of Discharge		18.6

etal pleura by adhesions, thus limiting the expansion. One of the two cases was cured by further aspiration and penicillin injection and did not require drainage, and the other required late drainage and a modified Schede thoracoplasty. An analysis of these two failures has led us to believe that they were due to a long-standing post-operative dead space. We now do an incomplete thoracoplasty at the time of lobectomy on such cases to diminish the size of the space. This, however, is rarely necessary. It is interesting to note that the two failures to prevent empyema and bronchial fistula occurred in the first 14 lobectomies so treated, with no such complications in the last 22 cases. Recognition of the danger of a prolonged dead space in the pleural cavity and the ability to prevent this by foresight

at the operating table has probably caused this improvement.

In conclusion, we believe the failure of others[1] to duplicate the low incidence of empyema and bronchial fistula with the use of penicillin post-operatively in pulmonary resection is due to the fact that the pleural spaces have been drained for a few days at least, and that in the most important period, the first few post-operative days, the concentration of intrapleural penicillin cannot be maintained in the presence of a drain.

We have seen no necessity for this temporary drainage and have seen no complications from its omission. Other series of cases published have differed in no other essential features of management. Parenteral penicillin, used also in our cases, has not resulted in the reduction of the morbidity which has been possible in the present series by the additional use of intrapleural penicillin in a *closed* space. Furthermore, by maintaining an intact pleural cavity, negative pressure induced by daily aspiration is maintained, facilitating rapid expansion of the remaining pulmonary tissue, rapid obliteration of the pleural space, and therefore minimization of bronchial fistula and empyema.

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Radioactive Iodine Arrested Cancer in Hyperthyroid Man.

Radioactive iodine was effective in the treatment of a man with a malignant thyroid gland tumor, according to three New York investigators writing in the December 7 issue of *The Journal of the American Medical Association.*

The authors are S. M. Seidlin, M.D., L. D. Marinelli, M.A., and Eleanor Oshry, B.S., from the Medical Division and Department of Medical Physics of the Montefiore Hospital and the Physics Department of the Memorial Hospital.

The investigators state that the patient, who in 1923 had his thyroid removed, "was in apparent good health for 15 years." In 1939 he suddenly showed all the symptoms of an overactive thyroid, such as nervousness, loss of weight and a rapid beating of the heart. In addition, severe pains developed in the lower back and radiated down the legs. Examination revealed a malignant tumor which had spread from remaining thyroid tissue.

Subsequently, other cancerous tumors were found in the lungs, thigh bone, second rib on the left side, small intestine and skull. In 1943 treatment with radioactive iodine was begun after x-ray and drugs proved ineffective. It was administered by mouth in the form of sodium iodide in water. "Definite and lasting clinical improvement followed," state the authors.

In 1944 and in 1945 additional treatment with radioactive iodine was given with a "resultant disappearance of pain, increase in weight and progressive change in all clinical criteria in the direction of hypothyroidism [decrease in thyroid activity]. Roentgenographic [x-ray] evidence pointed to an arrest if not a regression of the disease," states *The Journal* article.

In conclusion the investigators say that "radioactive iodine seems to be an effective therapeutic agent in the control of this type of tumor."

THE APPLICATION OF THE PRINCIPLES OF EARLY AMBULATION TO SURGICAL PATIENTS*

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It is quite pleasing to review the past and appraise its successes, which indeed are very numerous. In that review of our past and current work, we routinely observe relative advances in physiology and biochemistry. These advances impose on us the natural question of whether or not the utilization of that increase in knowledge, properly planned, will or can lead to a better day for our patient.

Surgical procedure and postoperative care should go hand in hand with our increased understanding of physiology. One of my reasons for making this report is that a better understanding, from numerous clinical visits and other study, has revealed to me the hazard of long bed rest in patient care.

Physicians are loath to recognize that a cardinal physiologic principle of postoperative care is constantly being violated by the habit of immobilizing surgical patients. We stand indicted as persons not willing to give up a habit, or routine, in favor of a better practice for which there are anatomical, physiological, biochemical, and psychological reasons for so doing. Confining surgical patients, therefore, for long periods is a tradition handed down from James Hilton,[1] and others. Because these doctrines have gone unchallenged to a great extent, prolonged bed rest continues to be a regular practice with many surgeons. At this point I wonder why habit defeats reason. Personally, I know that we hold our teachers in high esteem and there is still evident reluctance to cast aside teachings of the past. We have the usual, or a little more than usual, amount of fear of disaster. Furthermore, we realize that the court of public opinion does not understand our scientific reasons and will tolerate the departure poorly. That attitude of the public is quite understandable because our reasons for adopting the practice would not ordinarily be included in general culture.

Patients who are ambulatory during the immediate postoperative period exhibit conspicuous subjective improvement. If the patient's well-being and prompt recovery are acknowledged to be the prime consideration in treatment, it becomes us to reverse our thinking and adopt a more physiological approach to the problems of rehabilitation and prevention of complications. I believe the time will surely come when all will agree that proper exercise to promote rapid healing and avoid postoperative complications will be generally accepted, just as we accept the fact that aseptic technique must be used to prevent infection.

Historically, the practice of early ambulation, which I favor, is, as you know, not new. Ries,[2] in 1899, reported a series of cases. Another series of six thousand cases was reported by Zava,[3] in 1940, and altogether one hundred and twenty-six reports have been made favoring the practice. I, personally, know more about the work of Leithauser[4] and Shouldice,[5] and, from numerous visits to their clinics, their results are indeed revealing.

Many eminent men in surgery have only recently adopted the practice of early ambulation. Dr. Evarts Graham,[6] in the Year Book of Surgery, 1943, commented editorially on the first Leithauser report by saying that something must be wrong with the early rising practice because it had been tried so often and didn't seem to stick and it was his choice to follow the doctrine of Hilton. This master surgeon, today, approves the practice, as expressed in personal communication, July, 1946, and I interpret the change of point of view of this wise personality as an example of greatness, the greatness of his mind being the ability to forget as well as learn.

From my own experience of one and one-half years with this practice, it is interesting to observe the opening sentence in Ries' report to find how nearly his language coincides with my experience fifty years later. His opening sentence was: "The purpose of these changes which I have worked out within the past four years has been to free patients from many irksome and disabling features of after-treatment as usually carried out, and at the same time to make their recovery more rapid and more complete so that they are able to leave the hospital at a much earlier date than has been customary and in such condition of strength that they can follow their wonted occupation within a few days after discharge from the hospital".

*Read before the Richmond Academy of Medicine, January 14, 1947.

This brief historical report of early ambulation after surgery would not be complete if we did not emphasize that it is a logical development in the progress of surgery. You recall the various milestones, beginning with anæsthesia and ending with chemotherapy. So, all that I am saying now deals with the control of pathological physiology which is likely to exist in surgical patients if the bed period is too long. My own conception of early ambulation is ambulation during the *immediate* postoperative period.

Figure I represents a limited variety of operations because the practice was applied to the operation, herniorrhaphy, for one year before it was used generally. I do not observe any physiological or anatomical reason that prohibits wider utilization. The anæsthetic agent in all cases was procain infiltration, except the vaginal plastics, which were performed under spinal anæsthesia, and both hysterectomies were supplemented with pentothal sodium in small quantity. Not any received narcotic drugs postoperatively, the capsule of aspirin and nembutal being adequate; not any were catheterized; all had soft diet for the first postoperative meal and general diet thereafter, but it was not always consumed; all had skin clips removed at the end of twenty-four hours. Complications recorded are two small superficial hæmatomas, which in no way prolonged disability period, and resulted from poor hemostasis and not ambulation. These cases represent a cross section of people: one a physician; one a dentist; business men; laborers; and a few women. Sixteen of these cases were ambulatory in the operating room, three of which were appendicitis with perforation.

In adopting this change in postoperative care, the very large subject of physiology takes first place. Our objective is how can we engage in the laparotomy syndrome with minimal disturbance to normal physiology, and how quickly can the damaging effect to physiology by trauma, drugs, and body reactions, be restored.

It would be a large task to discuss the effect of trauma, drugs, and reactions on the respiratory, circulatory, and gastrointestinal systems, but that influence is the background of my point of view and explains why my series did so well and were so happy.

Respiratory Complications

As concerns respiratory complications, it is regretted that time will not permit a full discussion of respiratory physiology, the part played by the diaphragm, the mechanism of the formation of mucous plugs, the cough reflex, the relationship of pleural and abdominal pressure, and other general influences on vital capacity. So, without full discussion, I shall ask you to agree that surgery cripples respiratory function and that immobilization in bed is not conducive to good pulmonary ventilation. The work done by Churchill,[7] and proved to be true in my small series, proves that vital capacity returns to normal in three days in the ambulatory patient, and twelve to fourteen days in the immobilized patient. The experimental work of McMichael and McGibbon[8] also emphasizes that fact when they report that in the recumbent position the fully expanded lung is diminished by 340 cc., the decrease in volume being the result of pulmonary congestion. It is logical to conclude that the threshold of pulmonary ventilation is low in recumbency, and, unless that low threshold is compensated for, or offset, by deep breathing, coughing, and walking, the pathological physiology with which you are familiar will obtain. It should be remembered, anatomically, that the respiratory system is the only system which func-

Figure I

JULY 10, 1945 TO DECEMBER 10, 1946

Type of Operation	*Number of Cases*	*Hours in Bed*	*Hospital Days*	*Complication*
Herniorrhaphy	69	530 — *(7.6 average per pt.)*	301 — *(4.4 average per pt.)*	0
Appendectomy	15	34 — *(2.3 average per pt.)*	53 — *(3.5 average per pt.)*	0
Vaginal Plastic	3	14 — *(4.7 average per pt.)*	22 — *(7.3 average per pt.)*	0
Interposition (Watkins)	2	24 — *(12 average per pt.)*	9 — *(4.5 average per pt.)*	0
Hysterectomy	2	16 — *(8 average per pt.)*	13 — *(6.2 average per pt.)*	0
Cholecystectomy	1	4 — *(4 average per pt.)*	6 — *(6 average per pt.)*	0
TOTAL	92	622 — *(6.8 average per pt.)*	404 — *(4.3 average per pt.)*	0

Figure 1. Ninety-two consecutive operations that were ambulatory from two to twelve hours postoperatively. Sixteen of these cases were ambulatory in the operating room. Hospital period averaged 4.3 days.

tions against a special handicap of draining uphill, and I strongly favor utilizing voluntary coughing as early in the postoperative period as possible.

CIRCULATORY COMPLICATIONS

In giving consideration to circulatory changes, we are again confronted with the big subject of physiology and a complex chain of events even more important than those referred to. Trauma, the same agent, is the stimulus that initiates reflex reaction to the vasomotor system. These reactions which result from fear and pain and other reactions bring about vasoconstriction of some vessels and vasodilatation of others. This results in the pooling of stagnant blood in the legs and viscera and consequent loss of blood volume, inadequate distribution of nutriment, and removal of waste from the tissues. Accordingly, there is circulatory stagnation, anoxemia, and increased capillary permeability, which leads to peripheral circulatory collapse. This pathological physiology relating to the circulatory system is increased by inactivity for the reason that activity and tone of the voluntary muscles is a prominent factor in controlling blood supply. It follows, then, that the dysfunction, initiated by reflex changes incident to operation and aggravated by confinement to bed, is a conspicuous factor in the development of the thromboembolic syndrome. deTakats[9] has shown that these reactions also greatly influence the fibrinogen value, which we know to be dangerous in stagnant blood. He referred to the increase of fibrinogen as a normal physiological response, but we do not wish for it to be at a higher than normal level when blood velocity is slow. It is, furthermore, learned from this same worker that the traumatized area, along with mild hemorrhage, liberates a thromboplastic agent. This substance has many names and presently is called thrombokinase, which, theoretically, is essential in the formation of thrombin, an insoluble protein not found in normal blood.

I do not argue that the increase in fibrinogen value, which obtains in all surgical patients, alone will cause thrombosis. But the increase of fibrinogen, the presence of thrombin, if I am correct in that belief, in stagnant venous circulation, with mechanical pressure added on a collapsed vessel and not corrected by walking, furnishes a favorable site for the deposition of thrombocytes and subsequent thrombus formation.

In the thromboembolic syndrome, a thrombus has to obtain some maturity and size before the embolus separates itself and is fatal or troublesome, and while that takes place in the large veins, our main interest is in the point of origin. Neuman[10] has conducted extensive studies on this subject and I believe him to be correct in concluding that the site of origin is in the calf region most often, and the plantar region next. In 1941, Barker,[11] from a Mayo Clinic study, discussed venous thrombosis, statistically, commenting chiefly on how often phlebothrombosis, the serious circulatory complication, develops without warning. His study included three hundred and forty-three cases of fatal pulmonary embolism, and found that only eighteen cases, or 5.2 per cent, had been diagnosed clinically. That report impresses me as an unfortunate circumstance, but we know it to be true, because of the difficulty of bisecting the syndrome into the two phenomena. The patient's life may well depend upon the physician's differentiation between phlebothrombosis and thrombophlebitis, as symptoms, etiology, treatment, and seriousness are quite different in the two complications. Phlebothrombosis is more difficult to diagnose and is potentially fatal.

Figure II

	Cases	*Atelectasis*	*Threatened Atelectasis*	*Thrombophlebitis*	*Phlebothrombosis*	*Deaths*
Leithauser	2047	0	2	2	0	14
Shouldice	1150	0	0	0	0	1
Trice	92	0	0	0	0	0
	3289					

Figure II, of 3,289 consecutive cases that were ambulatory during the immediate post operative period, emphasizes the absence of the serious circulatory complication, phlebothrombosis.

Apperly,[12] in public lectures, has stated how often we ignore the musculature of the extremities in considering circulatory changes. He invites our attention to the fact that complications seldom develop in the hands and arms and that we are wrong in not utilizing the leg muscles as an aid to decreasing circulation time. The correctness of his belief is borne out by the work of Baker and Sedwitz[13] in their

studies of venography, which illustrates that the diodrast spreads to the femoral vein in fifteen seconds in the walking patient and that it remained in the leg fifteen minutes and longer in the immobilized patient, a nice example of the importance of muscular activity. I, for one, believe that exercise of the legs is essential in preventing thrombosis and, as Leithauser has pointed out, there is no exercise that equals walking. He also points out, with excellent physiological argument, that those changes which lead to thrombosis are present early, at the time when trauma and effect of drugs are offering their maximum influence. So, no plan other than early walk-



Figure III
Figure III is that of an incision twenty-four hours old after skin clips had been removed.

ing and coughing will suffice. His series of cases proves that walking can be enforced safely during the immediate postoperative period.

I have not had any experience with heparin or dicumerol, and, as of the present, believe that I will not need either one, because I believe that simple, natural methods of restoring normal physiology, as advocated and used by Leithauser, are superior to clever, ingenious, or fancy though scientific, methods. I hesitate to say that the use of these drugs has no place in surgery, but I do believe their use is directed to a complication, which ordinarily would not exist except for an unphysiologic practice, which is prolonged bed rest. The patient should have the benefit of walking and there is no substitute for it.

GASTROINTESTINAL COMPLICATIONS

There is much to say about the harmful effects of distention, especially what causes it, and without a physiological explanation, which would be lengthy, I shall abstract my belief by saying that it is beneficial and protective to have a loss of motor function during the early hours of healing, but, if inhibition to motor activity is prolonged, serious consequences develop, directly from confinement and indirectly from crippled respiration, crippled circulation, and loss of muscular tone.



Figure IV
Figure IV illustrates a very comfortable and satisfactory dressing. This patient was ambulatory in the operating room.

COMMENT

It is difficult to convey the extremely favorable impression made on me by the departure from a firmly entrenched routine of postoperative care. The favorable reasons for this practice do not lend themselves well to any general description which equals the experience of observing these patients. Emphasis has been directed toward physiological consideration in surgical management, especially to a routine that prevents "deconditioning".

Contraindications to early ambulation after sur-

gery are extremely few. Clinically, profound shock and prediction of fatal outcome are the only two. Technically, unanatomical incisions and poor choice of suture material.

Infection, peritonitis, fever, and moderate circulatory deficiency do not contraindicate walking. The latter circumstances do, however, involve the judgment of the surgeon.

Early ambulation restores nitrogen equilibrium promptly, which shortens the lag period of healing.

Local infiltration has proved to be a very satisfactory anæsthetic agent.

SUMMARY

1. Prolonged bed rest has been practiced because of respect for tradition and fear of complications.
2. Immobilization of surgical patients violates physiological principles and contributes to postoperative complications.
3. Early ambulation is a logical step in the progress of surgery and offers an excellent perspective.
4. There are definite anatomical, physiological, psycological, and economical advantages to the practice of early ambulation.
5. Ninety-two cases of major surgery presented in Fig. I show that the average bed period was 6.8 hours and the average hospital stay was 4.3 days.
6. Review of three thousand, two hundred and eighty-nine cases summarized in Fig. II indicates that respiratory and circulatory complications have been reduced by early ambulation and voluntary and involuntary coughing.

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Trace Sensitivity to Playing Cards.

Certain chemicals which are used in the finish of playing cards may cause a rash due to the hypersensitivity of the person, according to the December 7 issue of *The Journal of the American Medical Association.*

Answering a query on which of these chemicals might produce a contact dermatitis, *The Journal* states:

"The ordinary playing cards are made of paper and stiffened with sizings. Sizings may be any of the natural or synthetic resins or such substances as sodium silicate. Any of the synthetic resins, if they are not completely cured, may cause sensitization dermatitis. Of the natural resins, rosin is the best known sensitizer. Sodium silicate, water-glass, has not been reported as the cause of sensitization dermatitis.

"Within the past few years there have appeared on the market washable playing cards which are made of synthetic plastics. If these are incompletely cured they may cause dermatitis, just as may the synthetic resin sizings. In instances in which the dye comes off the playing cards, it is possible that some one may be sensitive to such dyes."

PSEUDO-MASTOIDITIS*

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The appalling lack of necessary dental care for the average person is patent to every otolaryngologist. This happens in spite of the fact that we are constantly bombarded *via* the radio, by some pseudo-benevolent manufacturing house, whose announcer regularly interrupts the radio program every 10 minutes to bawl into our long suffering ears the marvellous merits of his particular brand of tooth paste or powder, the use of which will immediately transform the purchaser's teeth to brilliance and perfection, whether or not the teeth are irregular, gnarled, broken or carious.

After all this he piously advises his hearers to visit their dentists every 6 months, which of course 99% ignore. It is an ironic euphemism to refer to the lack of dental care of the "average" person. The real fact is that, as the patients come and go in the otolaryngologist's office and their mouths are examined routinely, practically all of them are either suffering from present or past lack of dental care. The majority are suffering from decayed, lost, infected, or carious teeth, gums or jaw bones, ill-fitting bridges, inlays or false teeth plates. One wonders at some of the alleged sets of false teeth whether or not we have progressed much since the start of the last century and a half when George Washington was said to have been blessed with a set of false teeth which weighed one pound avoirdupois.

Particularly the children's teeth are a mass of decay, infection, vitamin and mineral deficiency, laying the foundation for undeveloped jaw bones, mouths, cheeks, high arched palates, receding or prognathus chins, from which there is no relief as the condition becomes stabilized with the growth of the children. Just before the child enters school at 6 or 7 years of age, the parents, who are worn out with the incessant colds, sore throats, upset stomachs and bowels, to say nothing of measles, whooping cough, scarlet fever and all the other so-called unavoidable children's diseases that have made life a thing of torment for both mother and child, dutifully bring the child to the pharyngeal surgeon to have his tonsils and adenoids removed, absolutely certain of the fact that this operation will counteract the results of all the above catalogue of horrors and prove a panacea for good health ever afterwards.

It is superfluous to call attention to the rising tide of medical literature refuting such claims. As we examine these little sufferers, we are forced to the observation that what most of these children need is not the tradition T & A but a thorough oral overhauling by the dentist. In short, their teeth are simply a mess.

This brings us to the object of this paper. Patients are constantly being sent to our offices or coming of their own accord, complaining of earache, wanting X-rays taken of their ears and mastoids, believing themselves in imminent danger of severe aural or mastoid disease. They complain of severe earache, pains over the mastoid, behind the mastoid, over the occiput, behind the jaw, under the jaw, down the neck, back of the neck, etc. A few exemplary cases will serve to illustrate this syndrome.

Case I. P. H., age 32, white male, came to the office 6/27/43 complaining of right earache, with pains radiating in front of the ear and over the mastoid, also over the maxillary bone and radiating down the neck. He said that he had suffered from it almost incessantly for the greater part of a year. Examination of the ears, nose, throat and eyes was negative. This appeared to me to be more in line with what Sluder has so carefully outlined and developed in his syndrome.

Thereupon I proceeded to anesthetize the right sphenopalatine ganglion. As in all these therapeutic measures, the psychic influence upon the patient produced a passing relief and the patient left feeling that his condition was improved. However, about 6 months later I met the patient who informed me that the pain returned soon after leaving my office and he had finally decided, since it was not his ear nor his nasal ganglion that was causing his trouble, it must be his teeth. He therefore went to his dentist who found an impacted wisdom tooth in his right upper jaw; he extracted the tooth and cured the patient.

*Read before the Buchanan-Dickenson County Medical Society on August 28, 1946.

This emphasizes what, with the passing of Sluder and the lapse of time, is becoming more and more evident, that the syndrome he so beautifully worked up and firmly believed in, is disappearing from medical lore. As a matter of fact, the British have always been hesitant about accepting this syndrome, and it has been years since much about it has been published in American medical journals. Certainly in this case I was entirely wrong in supposing such a diagnosis. The proximity of the impacted tooth to the ear caused the pain to be referred to the ear and confused the patient in his interpretation of the symptoms.

Case 2. M. P., age 43, white female, was seen 3/4/45 complaining of pain in the left side of her head, radiating over her maxillary bone, temporo-maxillary joint, ear, mastoid and occipital region, also involving the opposite side of her head. Examination of the eyes, ears, and nose was negative. On looking into her mouth there was a vast denuded area of scar tissue about the size of a half dollar on the inside of the left cheek. Considering her age and the alarming appearance of the lesion, she was suspected of having an incipient malignancy of her cheek. The condition was watched and treated with silver nitrate, astringent mouth washes, X-ray, and what have you. In spite of all treatment the condition grew steadily worse and the area became more and more inflamed and more and more enlarged. On questioning her one day I asked her concerning her teeth. All her molars and bicuspids were absent from her lower jaw. In order to chew she had to push all her food forward. She said that this maneuver caused her to force her left cheek inward so that every time she chewed the upper back teeth scraped her left cheek, causing this continued irritation in spite of all treatment. The patient was advised to go to her dentist and have a partial plate made so as to replace the missing back teeth, allowing her to chew her food in a natural manner. So far as I know, she eliminated the irritation to her cheek and effected a cure of what was suspected of being a malignancy; indeed this would certainly have resulted had the offending dental condition not been corrected.

Case 3. E. T., age 34, white male, consulted me at the office 3/16/46 complaining of right earache. He gave no history of previous ear trouble nor was there any discharge from the right ear. His pain radiated all around the ear over the parotid and mastoid region. Pressure over Ewing's point on the right side elicited pain, lending the impression of frontal sinusitus. There was numbness of the right roof of the mouth. He had an upper plate, but no lower plate, yet all lower back teeth were missing. He says he chewed on his right side between his upper and lower front teeth. Examination of the eyes, ears, nose and throat was negative. X-ray of sinuses was negative. He stated that the pain in his ear had lasted for a long time and that the condition was growing worse in spite of treatment over that period. He had run the gauntlet of all the usual treatments: ear drops, salicylate, sulfonamides, diathermy, X-ray, etc. Realizing there was nothing wrong with the ear, I decided it was due to the malocclusion of his teeth and improper mastication and advised him to see his dentist and have a proper prosthesis made to eliminate his dental defect.

Case 4. D. T., age 22, white female, complaining of severe right earache off and on for the past 2 or 3 months. Her pain radiated over both temporo-maxillary joints, more so over the right side. Pain extended over right ear and mastoid and radiated to the occiput, submaxillary region and over the whole right side of the cervical region. The cervical glands were only slightly enlarged and not acutely inflamed. Examination of the eyes, ears, nose and throat was negative. Her tonsils had been removed when she was 6 years old. She had no upper teeth of her own but had an entire upper plate. All her lower teeth were gone except a right decayed molar that was flush with the gum and useless for chewing purposes, also a few loose lower front teeth that were oozing with pus all around them from pyorrhoea. She said that she chewed her food between her front teeth as best as she could. Patient was advised to see her dentist and have all her lower teeth extracted and a lower plate fitted which would render her bite normal and enable her to masticate her food properly.

COMMENT.

These are just a few examples of cases that can be multiplied indefinitely from the practice of every otolaryngologist in almost every day of his practice. Teeth as a source of infection directly and by metastasis have long been incriminated as a source of human suffering, and myriads of teeth have been sacrificed, mostly with salutary results, although, as in any new discovery, this fact has been used many

times injudiciously with the loss of many sound teeth.

It should be remembered there are possibilities of pathological sequelae of malocclusion of teeth complicated by incorrect bite and dislocation of the temporo-maxillary joint both temporarily and later on permanently with the wearing away of the articular cartilage and erosion of the bone neighboring on the joint. The cartilage in many cases becomes dislocated. When a patient has to chew on his front teeth there is a circular motion to the side of the bite in which the mandible is alternately thrown into the exaggerated positions of recession and prognathism. This is wholly unnatural and causes a motion of the temporo-mandibular joint that causes wear on the periphery of the joint, and stretching of the joint capsule. The muscles of mastication are also thrown out of their normal masticatory alignment, causing stresses and strains that are quickly reflected in the sensorium of the patient, resulting in the pain that finally brings him to the doctor. The wear on the joint sets up a chronic inflammation of the cartilage, periosteum and mucous lining of the joint. This is in close proximity to the ear and the patient is deluded into the belief that he has ear trouble. Most of these patients present a most trying problem to the doctor, for he sees no pathology in the ear and yet the patient complains of acute pain that simulates acute suppurative otitis media and demands relief. He suffers so acutely that he is sure he has acute mastoiditis and usually demands an X-ray, which shows nothing and only serves to confuse the situation. The muscular pains radiating all over the head and down the neck make one think of a rheumatic affection. As a result, we resort to the usual remedies—salicylates, sulfonamides, iodides, diathermy, etc., all of which are merely ameliorative and which, although temporarily relieving the pain, do not reach or eliminate the cause of the trouble.

The trouble, of course, is not in the ear nor is the mastoid involved. The cause lay in the teeth, resulting from the lack of the necessary care, in many cases dating from the very first years of the patient's life. It has heretofore been a common belief that nothing can or should be done to the milk teeth, being seemingly oblivious to the fact that a vast amount of work has been done and is being done in the matter of the scientific care of the teeth by proper feeding, hygiene and dental surgery.

Biggest Problem at A. M. A. Session in 1848 Was Epidemics.

When the American Medical Association held its first annual meeting in Baltimore, May 2, 1848, one of the principal points of discussion among the physicians was the progress of epidemics.

In writing a history of the American Medical Association in connection with the centennial celebration in Atlantic City, June 9-13, Dr. Morris Fishbein says that the doctors of that time were especially concerned with the frightful condition of emigrants coming from Europe.

"The Committee on Medical Practice," Dr. Fishbein writes: "called attention to the fact that thousands had perished on voyages to the United States and Canada. From one ship, the Virginia, bound from Liverpool to Quebec, with 470 passengers, 158 were buried at sea.

"During the year 1847, 100,000 souls left the British Isles for Canada. More than 5,000 of these died en route and another 8,000 within a few weeks after their arrival. The disease from which these people perished was typhus in its genuine form, and in some ships smallpox, dysentery and measles swelled the amount of mortality. There was much discussion of the ability to distinguish between typhus fever and typhoid fever."

The history of the A. M. A. is appearing serially in *The Journal of the American Medical Association* and will be printed in book form for the Atlantic City meeting.

THE TREATMENT OF THE PRE-FIBROTIC LIVER WITH ASCITES—REPORT OF A CASE*

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Experimental investigation during the last ten years of the pathogenesis, pathological chemistry and early reversibility of the pathological process in the so-called "alcoholic", portal or Laennec's type of cirrhosis of the liver has awakened new clinical interest in what is now a diagnostic and therapeutic challenge to the modern clinician.

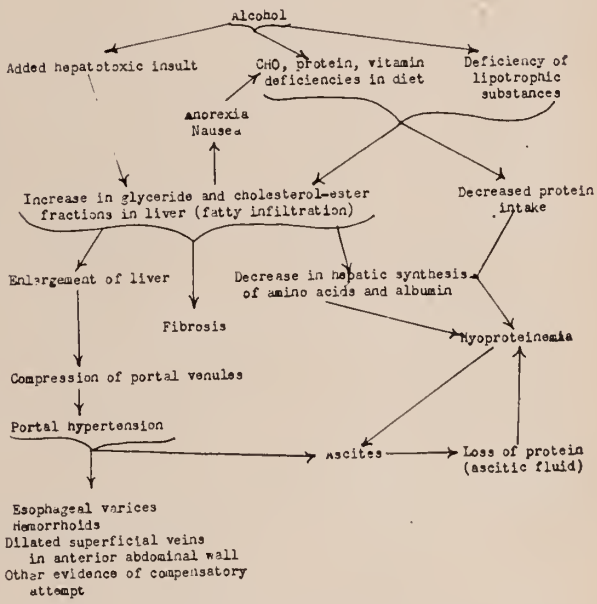
The term "pre-fibrotic liver" has been used to designate fatty infiltration of the liver, which, in the production of actual cirrhosis, or fibrosis, of the liver in experimental animals, has become well-recognized as an early developmental stage,[8, 9, 11, 12, 13] and one which is, for the most part, reversible. Dietary deficiency, rather than alcoholic intake, is now recognized as the factor of primary importance in the development of fatty infiltration,[3, 4, 8, 10, 28, 33, 36, 45, 46, 51] the alcoholic intake of the alcoholic addict acting merely as a discouraging factor to proper dietary consumption, and as an added hepatotoxic insult[11, 12, 13] to hepatic physiology and chemistry already disturbed by a lack of liver-fat-mobilizing or lipotrophic substances[23] contained in the normal diet.

With the development of fatty infiltration of the liver, and with a maintenance of lipotrophic substance deficiency, a self-perpetuating cycle of pathological events begins, which, if undisturbed therapeutically by the clinician, will have as its end result the well-known clinical picture of cirrhosis of the liver with its inevitable outcome.[44]

As a great hepatic protective mechanism,[35] the liver protein store is depleted by this infiltration of fat, and as hepatic protein synthesis decreases[40] and the resulting disturbance of serum proteins develops,[17, 20, 35, 40, 42] not only is the osmotic pressure of the blood lowered, mainly because of the lowered albumin levels, but also is capillary permeability increased.[20] Even greater loss of protein occurs as ascitic fluid collects (Fig. 1).

Enlargement of the hepatic cells, now tense with excess fat content, enlarges the liver and compresses the portal venules, elevating the portal pressure. This combination of forces, acting to produce excessive, extravascular fluid, may be aggravated by a recently suggested hypophyseal, anti-diuretic factor.[42] The resulting ascites,[17, 21] varices and attempted circulatory compensation is familiar to

Fig. 1



everyone. Nothing but disaster can occur as the portal venules are compressed even more as actual fibrosis develops, and as the disturbance in hepatic and reflected physiology and chemistry is increased.

The attention of the clinician must be directed toward early recognition of this pre-fibrotic phase. Any beneficial results must of necessity be obtained only from the patient whose pathological process has not progressed beyond the stage of fatty infiltration.[32]

With the aforementioned dietary deficiencies, the liver cholesterol-ester and glyceride content increases.[23, 41, 43] Therefore, important to the clinician are methods of rapidly mobilizing this excess liver

*Read before Richmond Academy of Medicine, April, 1946.

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fat. Dragstedt's work on lipocaic[23] began a new phase in the study of lipotrophic substances. In the last few years a search for, and an evaluation of, other lipotrophic factors has been made. Particularly have the lipotrophic properties of certain amino acids[19] and of certain members of the vitamin B complex[28, 30, 45] been studied. Brewer's yeast[28, 29, 38, 45, 46, 54] and lecithin,[1, 2] earlier recognized as possessing lipotrophic activity, have been found to owe this potentiality to choline,[2, 5, 6, 15, 16, 18, 22, 25, 29, 30, 34] methionine,[15, 18, 30] casein[15, 30, 34] and betaine,[18, 54] contained therein. Recent work has favored choline or methionine, particularly since each of these has the ability to mobilize both the glyceride and cholesterol-ester fractions.[23] Between these two substances there exists a relationship apparently based upon methionine's labile methyl group.[23, 52, 53]

Investigation of the B complex has suggested that pyridoxine[23] and inositol[23, 24, 25] contain this lipotrophic power, while the other members of the B complex appear to have quite the opposite effect.[23]

Because of the lowered hepatic stores of protein and glycogen produced as fatty infiltration occurs, it becomes obvious that dietary, as well as other measures, are imperative.[7, 21, 31, 37, 47, 50] An adequate protein intake in itself will aid in mobilizing fat. All investigators agree that two or more fat-mobilizing factors are more effective than one.

Apart from the requirements of the fatty liver, a rapid restoral of the disturbed serum proteins is to be desired, with the hope that as the enlarged hepatic cells lose their excess fat, and the liver approaches its normal size, hepatic venule compression will be relieved, and with a restoral of normal serum protein and osmotic pressure levels internal fluid balance will be restored.

It is obvious that salt and fluid restriction are a logical counterpart in this attempt.[14] It has been suggested that, in patients who can tolerate them,[21, 37, 50] diuretics are of assistance in an attempt not only to counteract any anti-diuretic factor, but also to keep the circulating volume low to increase its ability to remove excess, extra-vascular fluid.

The following is a report of one case of pre-fibrotic pathology treated by a regimen based upon the foregoing evidence.

The patient was a white, adult business-man, 47 years of age, when he first sought medical aid on October 25, 1945, three weeks after the onset of constant right upper quadrant and epigastric distress, anorexia, nausea, gaseous eructation, swelling of the abdomen and of the ankles. During the last ten days of this period he had gained 23 pounds. There was no history of vomiting, hematemesis, bloody or tarry stools. There had been no mahogany-colored urine, clay-colored stools or jaundice.

Throughout his adult life he had consumed a half pint of whiskey a day, his food intake suffering seriously from his over-indulgence. There was no history of lues and serological determinations in the past were negative. There was no history of heart disease. His family's history, and the remainder of his past history and of the systemic review were non-contributory.

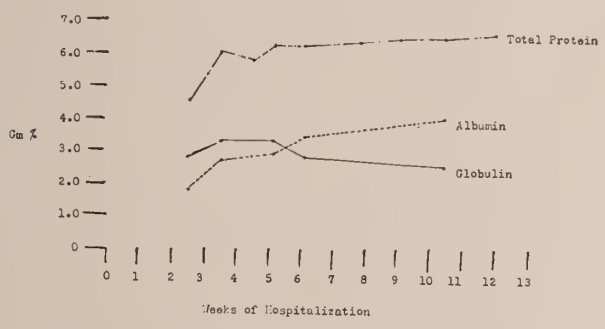
Physical examination revealed a tall, moderately well-developed, but undernourished, pale, white male, who appeared chronically ill, and who had the typical hepatic facies. There was slight dulling of the sensorium. B.P. 140/80; T. 99.2; P. 88; R. 20; Hgt. 5′ 11″; Wgt. 178 lbs. The skin had a dirty hue and lacked turgor. There were no telangiectases. The eyes and the cheeks appeared sunken. The sclerae were muddy and had an icteric tint. The tongue was heavily coated. The heart sounds were normal and the lungs were clear. The abdomen was extremely protuberant and the overlying skin was taut. There were dilated superficial veins in the anterior abdominal wall, but no caput medusae was evident. The umbilicus was everted. Shifting dullness was present in the flanks, and there was definite transmission of a fluid wave. The liver descended three fingers below the costal margin on deep inspiration and was tender. The edge was rounded and the surface was smooth. The spleen was not palpable. There were several skin tags about the anus, the area being somewhat erythematous. There was severe pitting edema of the ankles and about the sacrum.

Laboratory results were as follows: *CBC*-RBC-3.83; WBC-10, 450; HGB-15-5 Gms. Diff.-P.63; L. 21; M. 1; C.I. 1.19. *ESR*-12 mm. in 1 hr. *Urinalysis*-Vol. in 24 hrs. 600 cc. Sp. Gr.-1.031; Alb. and Bile—each one plus. Microscopic examination revealed O-1 RBC and WBC and a rare hyaline cast. *Blood Chemistry*-Ict. Ind. 18. Total Proteins-4.6 gm. per cent; Alb. 1.8 gm. per cent; Glob. 2.8

gm. per cent. Cholesterol (total)-84—repeated 130 mgm. per cent. Determination of percentage of cholesterol-ester, one of the earliest manifestations of this type of pathology was not done.[47, 49] NPN-20 mgm. per cent. Sugar (fasting)-117 mgm. per cent. Wassermann was negative. The Hanger cephalin flocculation test was not done.

The patient was hospitalized the following day and was immediately placed upon an extensive regimen which excluded alcohol. He was given a high vitamin, high carbohydrate, high protein, low fat, salt-free diet and received additional interval protein and carbohydrate feedings. Fluid intake was restricted to 600 cc. He received 45 Gms. daily of an oral preparation of amino acids. In addition to this he was given 3.0 Gms. of methionine orally each day. In the early days of his hospitalization 500 cc. of 5 per cent glucose was administered intravenously daily; however, this was abandoned for 50 cc. of 50 per cent glucose to further restrict the fluid intake. Fifty mgm. of thiamin chloride was given intramuscularly daily. Because of the fear that his damaged liver could not utilize amino acids as building blocks for protein as efficiently as a normal liver, and because it was felt that he required some already formed protein, particularly albumin, while waiting on his own mechanisms, 500 cc. of plasma was given on three occasions. Ammonium chloride and mercupurin were employed, the patient receiving 1.0 cc. of the latter on seven

Fig. 2.—Serum Protein Levels



occasions, decision for use being based upon the apparent state of his internal fluid balance. On the day of admission and two weeks later abdominal paracenteses were done, 4,600 cc. and 5,400 cc. of typical ascitic fluid being obtained.

The patient's course in the hospital was one of gradual improvement. Ascites collected more slowly after the second abdominal tap, but by the seventh hospital week the abdomen was again considerably enlarged by fluid contained therein. Diuresis of 2,500-3,100 cc. was being obtained following mercupurin injections. Because of the lack of distress paracentesis was postponed.

At this time the patient's serum proteins were approaching more normal levels, there having been a correction of the A/G inversion (Fig. 2). Gradually this ascitic fluid was resorbed and there was concomitantly a great change in the patient's general condition. His appetite improved, and there was a disappearance of his epigastric and right upper quadrant distress. His color improved, the icteric tint disappeared, and the liver became reduced in size, the border being sharper and the surface remaining smooth. Peripheral edema disappeared. Esophageal varices and internal hemorrhoids were demonstrated, and at one time there was a small collection of fluid in the left costo-phrenic sinus, but the latter also cleared.

At the time of his discharge from the hospital February 15, 1946, he was feeling well and had no complaints. He was eating well and had gained considerable strength. His facial expression, his skin and his sensorium had improved. The abdomen appeared to be free, or almost free, of fluid. His waist-line had returned to about that of his pre-ascitic days. The liver was smooth, had a definite border and descended to the costal margin on deep inspiration. The macrocytic anemia had markedly improved and there had been a restoral of normal serum protein levels. The icteric index, total cholesterol, prothrombin time, BSP and hippuric acid excretion tests were at normal levels. The urine was free of bile, albumin and sediment. At no time had there been any evidence of hemorrhage into the gastro-intestinal tract. Following discharge, the patient left the city.

A recent communication from the patient's mother, written about six months after the onset, states that the patient is feeling well and is not in need of any medical attention. It is not known whether or not he is cooperating with his hepatic physiology.

SUMMARY

1. There has been a brief discussion of the pathogenesis of cirrhosis of the liver.

2. The importance of early diagnosis of the pre-fibrotic phase has been indicated and brief men-

tion has been made of methods of combating this pathology.

3. One case of pre-fibrotic hepatic pathology, which exhibited marked improvement, has been reported.

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ACUTE APPENDICITIS—WITH A CASE REPORT*

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It is interesting to recall that appendicitis was described and named by an American surgeon, Reginald Fitz, in 1886, which was not so long ago. Ten years passed before the medical profession was sufficiently aware of the disease to make the operation for appendicitis frequent enough to save many lives. The pendulum swung far during the following ten years, and the operation was probably performed unnecessarily many times. I commenced the study of medicine in 1902, which was at the height of the popularity of appendectomy. I was told at that time of an unconscious bum picked up on the street and taken to Emergency Hospital. They removed his clothing to make an examination and discovered tattooed on his chest the following message, "Do not operate for appendicitis. I have had the operation three times already." The appendix is a prolongation of the cecum and is a tube whose walls are composed of the same four layers which form in the cecum. The lumen is narrow and the mucous layer contains much lymphoid tissue. The blood supply of the appendix is from the ileocecal artery, whose branches traverse the meso-appendix in a fan-shaped pattern. The cecum contains many saprophytic and other bacteria, many of which are pathogenic, and these bacteria must enter the lumen of the appendix frequently. They are swept out again by the mucous which the appendix continually secretes. The appendix may be from one to nine inches long and may point in any of six directions. Usually it lies low in the cecal wall and is surrounded by the cecum, the ileum, the psoas muscle, and the abdominal wall. This is fortunate because, when the appendix is inflamed, this position favors isolation from the rest of the abdomen, and the omentum (the policeman of the abdomen) usually moves over to further protect the diseased area.

Just how a given appendix becomes diseased is not definitely known, but it is assumed that anything which causes a narrowing or a stricture in the already narrow lumen results in a retention of infected material. The lymphatics become loaded and swollen. Pressure interferes with circulation. Thrombosis occurs first in the smaller vessels and then in the larger vessels. Pressure necrosis and perforation may occur, or gangrene may ensue because of lack of blood supply. If operation is done while the infection is confined within the appendix, uninterrupted recovery is the rule, but if the infection extends through the walls, abscess formation or general peritonitis may occur.

The prognosis of appendicitis depends upon three factors:

1. The time of operation.
2. The variety and virulence of the infection.
3. The resistance of the patient.

It is interesting to note that the mortality rate from appendicitis was approximately 5 per cent twenty years ago, and that it is approximately 5 per cent today. The sulfa drugs and penicillin and a realization on the part of the people that they should consult a physician promptly in case of abdominal pain will undoubtedly reduce this percentage. A factor which undoubtedly is a cause for mortality is the administration of cathartics which increase peristalsis, prevent adhesions, and allow dissemination of infection throughout the abdomen.

Appendicitis may be acute or sub-acute and, of course, recurrent. There seems to be no pathological basis for the term "chronic" appendicitis. Acute appendicitis occurs suddenly with moderate crampy pain in the epigastrium or umbilical region. This pain becomes more severe gradually, and nausea or vomiting, or both, may occur. After a few hours, the pain is localized in the right flank, and there is moderate fever and a moderate pulse rise. There is rigidity in the right rectus muscle and the patient lies quietly in bed with the right thigh usually flexed on the abdomen. Polymorphonuclear leukocytosis is usually present. Leukocytosis should not be depended upon for diagnosis. When it is present, it is a confirmatory sign and gives a fair indication of the resistance of the patient and the amount of inflammatory involvement. It is frequently absent, however, in perforated and gangrenous appendices. Some physicians wait hours before seeking surgical

*Read before the Prince George County, Maryland, Medical Society.

advice until they can obtain a white count, thus jeopardizing the patient's life for an unnecessary procedure. I remember asking Dr. DaCosta of Philadelphia, Pennsylvania, one time if he obtained a leukocyte count as a routine in suspected appendicitis. His answer was, "Yes, two days after the operation." He did not consider it necessary before operation, even in those days. The patient suffering from peritoneal irritation remains quiet in bed because movement of the body increases pain. Thus, the appendicitis patient differs from the patient suffering from renal or gall-stone colic because these patients are continually in motion seeking a more comfortable position.

I have described the usual text-book picture of appendicitis, and, of course, most of the cases follow this pattern. Often they do not, and the experience and skill of the surgeon must tell him that he is dealing with appendicitis.

Once appendicitis is suspected, the patient should be denied any food or drink. He must have *no treatment* until operation is decided upon. After consent to operate is obtained, he may have morphine and ice bag for his comfort. Many people believe that the ice bag has some therapeutic value and that appendicitis may be cured by its application. This is a fallacy. Ice was the first known anesthetic. It diminishes pain by action on the skin nerve endings. Of course, some patients recover after its use, but they would have recovered anyhow. Many first attacks of appendicitis recover spontaneously. Some do not. I do not know anyone smart enough to know which is which. Consider for a moment the distance between the ice bag and the inflamed appendix in a patient lying on his back in bed. In order to influence the appendix in the slightest degree, the cold of the ice must penetrate the skin, two inches or more of abdominal fat, two or more inches of abdominal wall, and two or more inches of space in the abdomen before it reaches the appendix. Of course, the appendicitis is not affected by the application of an ice bag.

It is worth remembering:

1. Appendicitis is the most common surgical disease of the abdomen.
2. Diagnosis may be very easy or very difficult.
3. Immediate operation is advisable.
4. No treatment should be given until operation has been decided upon.
5. If diagnosis is doubtful and it may be appendicitis, operate.
6. Blood and urine should be examined if possible before operation. Leukocyte count is unreliable.

The following list includes most of the conditions which may be confused with appendicitis:

In Children
Pneumonia; Pyelitis
Intestinal obstruction
Peritonitis (T. B. or pneumococcic)
Intestinal parasites
Mumps
Measles

In Young Adults—see above, also
Pleurisy
Typhoid
Influenza
Lead colic
Intermittent hydronephrosis
Nephrolithiasis
Nephroptosis right
Perinephritic abscess
Cholecystitis and lithiasis
Peptic ulcer
Torsion of omentum
Regional ileitis
Diverticulitis
Pancreatitis
Mesenteric thrombosis
Incarcerated hernia
Tumor of abdominal viscera
Epigastric hernia
Food poisoning
Orchitis
Vagotonia

In Young Females—see above, also
Torsion of ovarian cyst or fibroid
Ruptured graafian follicle with hemorrhage
Salpingitis
Ectopic gestation

In Elderly Adults—see above, also
Carcinoma of abdominal viscera
Prostatitis
Tabes dorsalis
Mesenteric arteriosclerosis

This list is quoted from surgical literature and is put here for the convenience of the diagnostician.

The following is a report of an appendectomy with complications:

Mrs. M. G., twenty-five years old, mother of one child four years old, entered Georgetown Hospital on February 16, 1945, at full term, with labor pains. Labor pains ceased and later that day she had

epigastric pain and vomiting. On the morning of February 18, pain became worse, and patient vomited again. I saw her at 2 P. M., in consultation with Dr. J. Bay Jacobs. Temperature was 100; pulse 100; leukocytes 12,700 with a preponderance of polys. There was pain and tenderness in right abdomen. I advised immediate operation for appendicitis. This was done.

Right rectus incision; thin yellow pus escaped when peritoneum was incised. Cecum was located with difficulty because it was adherent to the posterior peritoneal wall and also to the broad ligament (right). The appendix was as thick as the middle finger and was exuding pus from a hole in its side. A fecalith, the size of a pea, lay outside the appendix. In the manipulation to free the appendix, a large vessel in the broad ligament commenced to bleed. This hemorrhage was stopped with great difficulty because the tissues were friable and the sutures cut through. The appendix was removed flush with the cecum and the opening was sutured like a bullet wound. The abdomen was closed around a large rubber drainage tube and a cigarette. The patient was returned to her bed and given 1,000 cc. of whole blood. Five hours later, she went into labor and was delivered of a macerated dead baby. An extensive tear in the perineum required immediate repair. I saw the patient at 9 A. M., February 19. Her dressings were soaked with blood and our vessel in the right broad ligament was evidently bleeding again. Patient was sent to the operating room and the wound was reopened. The same difficulty was experienced in suturing the site of the bleeding which we had the day before. Bleeding was, at last, controlled and the patient returned to bed. Blood transfusions at 3 P. M. and 10 P. M.

February 20; pain in right chest; difficulty in breathing; atelectasis was present. Carbon dioxide and oxygen inhalations were given. This relieved respiratory difficulty and the oxygen was continued until February 23. Commencing February 18, and continuing for five days, sulfadiazine was administered every four hours. Soft diet was started on February 23. On February 25, right parotitis was present. This subsided in a few days under an ice bag. She returned to her home on February 28. On April 1, she was able to resume her usual duties and appeared to be quite well.

This case presents some unusual and interesting points. Appendicitis in late pregnancy is often fatal. The mechanical difficulties presented by a uterus at full term are great. The escaped fecalith; the great loss of blood from the broad ligament vessel; the devitalized tissue; the delivery with the perineal tear; the post-operative hemorrhage; the shock of two operations close together; the atelectasis and the parotitis, all presented hazards to recovery which makes me think of the famous expression of Ambrose Pare who answered words of praise by his king by saying, "I only dressed the wounds; God healed them."

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Six Leading Accidental Causes of Death in 1945.

Motor-vehicle accidents led all other types of accidental causes of death in the United States in 1945, according to the National Office of Vital Statistics, U. S. Public Health Service. Of a total of 95,918 deaths from all accidental causes, 28,076 were due to motor-vehicle accidents. Injury by fall ranked second as a cause of fatal accidents with 23,333 deaths. Drowning, with 5,676 deaths, was third in importance as a cause of accidental death, and burns fourth with 5,105 deaths.

A sharp reduction occurred between 1944 and 1945 in the number of deaths from airplane accidents. In 1945, 3,552 deaths were attributed to this type of accident, or slightly more than half as many as the total of 6,656 for 1944. The decrease which was probably due to curtailment of the aviation training programs of the armed forces brought deaths from airplane accidents to fifth place from a rank of third for 1944. The sixth accidental cause on the list for 1945 was railway accidents with 3,320 deaths.

Deaths from all other accidental causes numbered 26,856 or approximately 1,500 less than the number caused by motor-vehicle accidents alone.

THE CHOICE OF FORCEPS

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If we have an indication for forceps and are confronted with the multitude of forceps bearing the names of the many physicians who modified them, which instrument shall we use?

To make our selection, it is presumed that the operator has a good working knowledge as to the indication of forceps and the function of forceps and the knowledge of the application of them. The operator should be able to select the kind of instrument most suitable for the condition confronting him. Delivery should be accomplished with usually one, or at the most two kinds of instruments. A greater degree of success will be accomplished with a good working knowledge of all the various forceps. If the reader of this is helped to prevent only one birth injury, or one death of an infant due to cerebral hemorrhage, I shall feel greatly repaid for my small effort or contribution. The proper choice of forceps for a certain position or presentation should and will help prevent birth injuries and still-born babies and injuries to the birth canal of the mothers.

The desire for knowledge should transcend every other interest in every true and earnest physician. The fast-changing realm of medical science, and especially obstetrics, taxes all of us interested in obstetrics as it has never done before. It is a great task and obligation of ours to keep abreast with its rapid pace of progress. Yet, how humiliating it is for us to have to say, "I do not know". At such times one's own evaluation drops very low and chagrin is written on all our expressions—then we begin to wonder how we could have saved this baby. Much of this pity of ourselves can be avoided by reading good books and periodicals and by doing frequent post-graduate work if necessary.

First, let me state that there are a number of good forceps from which to choose, all of which fulfill the requirements of application and traction. Some instruments are simple, others rather complicated. All instruments, it seems to me, have one or more good features which justify their use when properly chosen. Some are very similar, so similar that a choice between them makes very little difference. The Elliott and Simpson forceps are rather similar. In the Elliott the shanks are over-lapped and the cephalic curve is short and more rounded than in the Simpson forceps in which the shanks are separated and the blades have a long tapering cephalic curve. It therefore follows that on moulded heads the Simpson forceps, with their long tapering curve, will usually give us the best application. This usually follows long second stage labor which gives the head time to mould. The choice should usually depend on the type of pelvis and upon the correct diagnosis of the amount of moulding, position and station of the head.

The Hawks-Dennen forceps are the ones that apparently approach the ideal for occiput anterior positions. This instrument includes all the good qualities of the various classical instruments combined into one instrument. The instrument is light and uncomplicated to use. It has fixed axis-traction. The pelvic curve of the tips of the long blades is exaggerated and permits extension over the perineum without injury to the sulci or vaginal floor. While the tips are curved more than in Simpson or Elliott forceps, they are long and are easily anchored below the malar eminences. They have Kielland cushion on the fenestrations which prevents cutting and pressure points. The shanks are springy, not unlike the Piper forceps, and this permits accommodation to heads of different shapes from moulding and to heads of different sizes with the least possible amount of injury or compression to the head.

A correct application is essential. A correct application prevents injuries caused by brow-mastoid applications. In a correct application the blades fit the head accurately and pressure is evenly distributed; the pressure is on the least vulnerable parts and the minimum amount of force is necessary for delivery. It lessens injury to the mother because with a correct application the head advances in the proper axis and attitude, with the expenditure of the minimum amount of traction. Traction was the original use for forceps and is still their most important function.

In the hands of the average practitioner the use of forceps should be restricted to that of traction.

If forceps are to be used for rotators, that should be left for the expert. I have seen dead babies as the

result of the untrained using forceps for rotators. I have seen irreparable damage done to the optic nerve because of brow-mastoid application. A correct application lessens injury to the mother because the head advances in the proper attitude. This is not true with the undesirable brow-mastoid application. When the occiput is anterior, the application is, as a rule, easily made and any classical forceps is satisfactory that fulfills the requirements of the moulding. From other positions and presentations there are several types of relatively new forceps which will be considered.

A high head in a flat pelvis may be angulated in such a position that a cephalic application cannot be obtained unless the forceps have a sliding lock principle. This is found in the Barton and Mann forceps and this position is an indication for their use.

LOW FORCEPS: Most heads are in the anterior position in low forceps. They either have been primarily anterior or have rotated to an anterior position from a partial or complete transverse position. The mother is usually a primipara or perhaps a multipara with a long labor. In either it usually means a moulded head with the sides flattened and lengthened. Here a Simpson type of forceps in which the blades have been lengthened, fits best. DeLee's model is a good forcep to use here. It has a long shallow cephalic curve and the tips of the blades can be anchored well below the malar eminences, preventing pressure points and slipping. In round heads, usually found in shorter labors, the Elliott type is suitable. However, if much moulding is present the Elliott forceps fits unevenly and sometimes gives difficulty in locking. The Tucker-McLane forceps are usually satisfactory for these heads. But on the heads with a great amount of moulding these forceps are not satisfactory because they may slip, due to lack of anchorage below the malars. They will also exert too much pressure on the zygoma and parietal boss. These solid blades are good for rotators in the Scanzoni maneuver but usually a fenestrated blade with a deep cephalic curve is better for this extraction. The deep cephalic curve prevents injuries to the vaginal floor and may lessen sulcus tears.

MID FORCEPS: In mid forceps the rules for anterior positions are the same in all stations of the head with emphasis on axis-traction. The DeWees gives the truest axis-traction. When we have a transverse arrest, some operators have developed their skill in the use of manual rotation. I have never been very successful at this procedure. I cannot rotate the head manually without displacing it and the head also refuses to remain anterior until a forceps blade can be applied. Even if the first blade is accurately applied the head may refuse to remain anterior until the second blade is applied and the handles locked.

In a rather roomy pelvis the Pomeroy maneuver may sometimes be used. This, however, is not recommended for those with a good working knowledge of forceps.

For deep transverse arrest or for occiput posterior positions, the Kielland forceps are the ones of choice. They may be applied easily and accurately. They have the sliding lock which permits adjustment on asynclitic heads at any level. In occiput posterior positions the Kielland forceps, which have the semi axis-traction curve if accurately applied, gives us the best results. They are used by a single application without displacing the head and give better results than "Key-in-Lock", Pomeroy, Scanzoni, or manual rotation. In some pelves, the more roomy ones, the delivery may be completed with Kielland forceps; usually it may be done especially since episiotomies are frequently done. In a funnel pelvis it is usually better to remove the Kielland forceps, which have a slight pelvic curve, and apply a fenestrated blade with a more acute cephalic curve. The forceps with the better axis-traction curve is applied after the head has been well rotated and after two or three pulls have been made with the Kielland forceps. This pulling prevents the head from rotating to its original position and also flexes and fixes the head in the proper attitude for axis-traction with a suitable forceps. By substituting a forceps with a better cephalic curve we get better axis-traction, better flexion, and prevent injuries to the posterior vaginal wall and perineum. The proper use of the Kielland forceps also rarely produces any injury to the face or facial paralysis. The bevel, or cushion, on the inside of the blades prevents cuts and bruises. The application by the inversion method prevents brow-mastoid application. Many difficult cases have been made easy by the use of Kielland forceps. In my opinion the danger of using Kielland's is the possibility of rupturing the uterus or bladder, or both. No one should attempt the use of these forceps without a thorough knowledge of them. The dan-

gers diminish as the knowledge of their use increases.

The use of the Kielland is contraindicated in the following conditions: 1. In a flat pelvis with transverse arrest, having a posterior parietal position; 2. In cases of asynclitic presentations; 3. Parietal positions and in funnel pelves with low symphysis and narrow arch; 4. In all flat pelves.

In all the above cases where the Kielland forceps are contraindicated, we may use the Barton forceps in almost every case, or we could use the Mann forceps, with which I have had no experience.

HIGH FORCEPS: Indication for high forceps is very rare. However, sometimes it is the better procedure of choice to do a high forceps with the Barton than to do a Caesarean section or a version. Sometimes the uterus is so hard and thick after a long labor that there would be a great risk to mother and baby to attempt version. In a flat pelvis, with the head impinged in the superior strait between the symphysis and the sacral promontory, the Barton forceps is outstanding because of its good pelvic curve with the hinged blade and the sliding lock which may be adjusted as the asynclitism is corrected. In face presentations the Kielland forceps are the ones of choice. Here the blades need not be applied in the upside-down method, or inverted method, but are applied directly to the sides of the head. This knowledge will stand us in good stead when the chin is posterior. After application with cephalic curve posterior, the head may be rotated and extracted without re-applying.

BREECH POSITION: The Piper forceps are in a class by themselves for extraction of the after-coming head in breech presentations. They have the dropped handles, springy blades, and axis-traction all combined in one instrument.

SUMMARY

1. In an indication for delivery with forceps there are two essential considerations: An accurate cephalic application, and traction following the pelvic curve.

2. A comparatively new traction curve forceps, the Hawks-Dennen forceps, embodies several desirable combined features suitable to anterior positions.

3. In posterior and transverse positions the Kielland or Barton forceps offer the most advantages.

4. In face presentations with the chin posterior, the Kielland's is the forceps of choice.

5. In breech presentations the Piper forceps, for the after-coming head, offers many advantages.

I desire to acknowledge the assistance and permission of Dr. Edward Dennen of New York for permitting me to draw freely from his article "Choice of Instrument in Delivery with Forceps."

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New Chemical Found Effective for Certain Pustular Skin Diseases.

A new drug has recently been gaining recognition as an effective agent against disease-producing bacteria which invade the skin. This chemical, obtained for the most part from oat hulls, is called Furacin, according to three Boston investigators writing in the February 1 issue of *The Journal of the American Medical Association.*

The investigators—John Godwin Downing, M.D., Millard C. Hanson, M.D., and Marion Lamb—are from the Department of Dermatology and Bacteriology, Boston City Hospital, and the Department of Dermatology, Tufts College Medical School.

Of 212 patients placed under treatment with this chemical, which is applied to the skin, 18 showed a brilliant response and 82 showed good response, while on 45 there was no follow-up.

"The drug shows excellent possibilities in the treatment of superficial infection of the skin, such as impetigo and ecthyma," according to the authors. Both of these conditions are of the same nature in that they are pustular infections of the skin. However, ecthyma is a deeper involvement with ulcerative lesions.

The authors point out that so far there has been no evidence of poisoning from absorption of the drug when it is used in large amounts over long periods. "Although the drug is capable of sensitizing abnormal skins, in our experience to date this tendency is less than that of sulfathiazole or penicillin when used for topical application," they state.

HEMORRHAGE IN PUTRID LUNG ABSCESS*

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This report is based on a review of putrid lung abscess cases that were admitted to the Medical College of Virginia Hospital from 1940 to 1944 inclusive. All non-putrid abscesses have been excluded and only suppurative lesions of the lung with foul, putrid sputum have been included.

During this five year period, there were 57 cases of putrid lung abscess that had sufficient clinical data for study. Several probable cases were excluded because of insufficient information in the record.

Hemoptysis was noted as being present if the patient expectorated several drams or more of blood. Simple blood streaking of sputum was not classed as an hemoptysis.

In an effort to grade the severity of the hemoptysis it was classed as small if only an occasional expectoration of approximately a dram of blood occurred, moderate if several drams were expectorated fairly frequently, and large if 200 cubic centimeters or more of blood were expectorated in any 24 hour period.

Of the 57 abscess cases there were 25 cases, or 44 per cent, that suffered hemoptysis. Of this number 11 cases suffered a small hemoptysis, 9 cases were moderate, and in 5 cases the hemoptysis was large.

Of these 25 cases of hemoptysis there were 7 deaths from hemorrhage—the patients dying of asphyxia from the overwhelming pulmonary hemorrhage. These 7 cases represent 28 per cent of all cases that suffered hemoptysis and 12 per cent of the entire series of putrid lung abscesses. Two of the 7 deaths from hemorrhage occurred in patients who previously had had surgical drainage of the abscess; an additional 2 cases occurred during bronchoscopy; and the remaining 3 were under medical treatment at the time of death.

Table 1 shows the number of cases in regard to the size of the hemoptysis and the number of fatal hemorrhages in each group. There appears to be some relationship between the number of cases of hemoptysis deaths and the size of previous pulmonary hemorrhages. Three of the deaths occurred among the moderate sized hemoptysis cases for an incidence of 33⅓ per cent, while there were 2 deaths among the cases of large hemoptysis for an incidence of 40 per cent. The correlation is only suggestive, as the number of cases is not sufficiently large for an adequate appraisal.

	57 Abscess Cases	7 Cases of Hemoptysis Deaths
Small	11	2
Moderate	9	3
Large	5	2

Table 1. Relation of size of previous hemoptysis to fatal hemorrhage.

Table 2 reveals the incidence of hemoptysis and hemoptysis deaths in relation to sex and race. As will be noted in this table there is a much greater number of putrid lung abscess cases among the males of both races than among females. This prevalence among the male sex has been the usual experience of those[1,2] who have studied this disease. The incidence of hemoptysis, however, roughly parallels the number of cases of lung abscesses and is between 40 and 50 per cent, except among the colored females where 3 or 4 cases suffered hemoptysis. It will be noted that there were no fatal hemorrhages among the females of either race. The fact that over half of the colored males who suffered hemoptysis died of fatal hemorrhage is interesting and is probably of statistical importance.

	57 Abscess Cases	25 Cases of Hemoptysis	7 Cases of Hemopytsis Deaths
White Male	25	10	2
White Female	7	3	0
Colored Male	21	9	5
Colored Female	4	3	0

Table 2. Relation of race and sex to fatal hemorrhage.

Table 3 reveals the relation of duration of the abscess to fatal hemorrhage. Among the entire series of 57 cases there was approximately an equal

*Read before the Richmond Academy of Medicine, September 24, 1946.

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number of acute and chronic abscesses at the time of their admission to the hospital. 49.5 per cent were admitted with symptoms of less than six weeks' duration; 50.5 per cent had symptoms longer than six weeks' duration at time of admission. An abscess of six weeks' duration or less is classed as an acute abscess, whereas an abscess of longer duration is classed as chronic. This, of course, is an arbitrary method of classification but is one that is widely accepted.

It will also be seen from *Table 3* that there was no significant relationship between the incidence of hemoptysis and the duration of the abscess, as the number of cases of hemoptysis followed roughly that of the number in each group of the entire series.

The fact that no fatal hemorrhage occurred in abscesses of less than four weeks' duration is probably significant, suggesting that the danger of fatal hemoptysis is less in a really acute lung abscess than in a chronic abscess.

	Total Abscess Cases		25 Cases of Hemoptysis	7 Cases of Hemoptysis Deaths
	Cases	%		
Less than 2 weeks	2		0	0
2 to 4 weeks	8	49.5%	3	0
4 to 6 weeks	18		9	1
6 to 8 weeks	7		6	1
8 to 12 weeks	9	50.5%	3	0
3 to 6 months	5		4	3
6 to 12 months	4		1	0
Over 12 months	4		0	2

Table 3. Relation of duration of the abscess to fatal hemoptysis.

Table 4 indicates the incidence of fatal hemorrhage among the medically treated and among the surgically treated (abscess drainage) cases. All of the cases drained surgically had been treated medically previously and all were abscesses of eight weeks' duration or longer. None of these abscesses were drained during the acute stage. Of the entire series of 57 cases there were 5 fatalities, or 13 per cent, from hemorrhage among the medically treated cases and 2 fatalities, or 11 per cent, among those drained surgically. While the number of cases is too small for definite conclusions to be drawn, the figures suggest that the incidence of fatal pulmonary hemorrhage is not influenced significantly by surgical drainage of abscesses of over four weeks' duration.

Table 4 also reveals the number of fatal hemorrhages among the hemoptysis group in relation to therapy; of the medically treated cases of hemoptysis, 35 per cent died of hemorrhage, while of the surgically treated group 25 per cent died of a similar cause.

There was no apparent relation between the size of the abscess and fatal hemorrhage. In only 2 of the 7 fatal hemoptysis cases was there a large abscess (over 6 cm. in diameter).

There was also no relation between the location of the abscess and fatal hemoptysis, three being located in upper lobes and four in the lower lobes.

	57 Abscess Cases	Fatal Hemoptysis	25 Cases of Hemoptysis	Fatal Hemoptysis
Medical	39	5 (13%)	17	5 (35%)
Surgical	18	2 (11%)	8	2 (25%)

Table 4. Incidence of fatal hemoptysis in relation to therapy.

DISCUSSION

Pulmonary hemorrhage is a frequent manifestation of numerous pulmonary diseases. The most frequent causes of severe hemoptysis are tuberculosis, bronchiectasis (including so-called bronchial erosion), carcinoma and adenoma of the bronchus, and lung abscess.[3] However, it is rare that fatal hemoptysis occurs except in cases of pulmonary tuberculosis and putrid lung abscess.

Most observers have found that approximately 50 per cent of all cases of pulmonary tuberculosis and of all cases of putrid lung abscess suffer hemoptysis at some time during the course of the disease. Jackson and Diamond[4] in 1941 reviewed the cases of hemoptysis at Temple University Hospital over the preceding ten year period and found that there were only three deaths from pulmonary hemorrhage, all of which occurred in patients with lung abscesses. This represented an incidence of 6 per cent of fatal hemorrhage among the lung abscess cases. Since their cases of pulmonary abscess included non-putrid as well as putrid lung abscesses, it is not possible to compare their findings with those reported here. It should be stated, however, that severe hemoptysis is much less frequent in non-putrid lung abscesses than in putrid ones.

Sweet,[5] in an analysis of cases from the Massachusetts General Hospital from 1938 to 1942, stated that massive hemorrhage was one of the important causes of death in cases of lung abscess, although he published no statistical report on the incidence of hemorrhage. He further stated that lobectomy was carried out in two of his cases because of serious hemorrhage.

Minor[6] in 1944 reported the incidence of hemoptysis in 1,000 consecutive cases of pulmonary tuberculosis admitted to Blue Ridge Sanatorium to be 24.3 per cent. Of 36 cases that suffered pulmonary hemorrhage while under observation in the sanatorium, 2 deaths were due to the actual hemoptysis. This certainly represents a much smaller incidence of fatal hemorrhage that that in putrid lung abscess.

Of the 57 cases of putrid lung abscess reviewed in this report, hemoptysis occurred in 25, or 44 per cent, of the cases, and fatal hemorrhage resulted in 7 cases, or in 12 per cent. There was a fatal hemorrhage in 13 per cent of the medically treated cases and in 11 per cent of those drained surgically. These findings indicate that neither of these types of therapy is effective in preventing serious pulmonary hemorrhage. For that reason it is believed that lobectomy is the treatment of choice in cases of putrid lung abscess when hemoptysis is a prominent feature. The incidence of fatal hemorrhage of over 50 per cent among the colored males who suffered hemoptysis suggests that lobectomy should be considered an imperative surgical procedure in these cases.

The fact that all cases of fatal hemorrhage occurred in patients with symptoms of lung abscess of four weeks' duration or longer indicates the importance of early and effective therapy of acute putrid lung abscess. Despite the recent reports[7,8] of encouraging results in the treatment of such abscesses with penicillin, it is doubtful if such therapy in a large series of cases will equal the results of Neuhof[9] in the surgical drainage of putrid abscesses in the acute stage.

It is very likely that massive hemoptysis in putrid lung abscess is a manifestation of the chronic stage of the disease, and, as such, indicates that the optimum chance of cure of the abscess has passed.

Because of the disappointing results in the medical treatment and in the surgical drainage of chronic lung abscesses, there have been an increasing number of lobectomies[10] performed for this condition in the past few years. And with improvement in surgical technique and with the progress in chemotherapy one can expect an increasing number of lobectomies carried out for this condition. It is likely that lobectomy will rapidly become the procedure of choice in cases of chronic lung abscess.

SUMMARY

1. Fifty-seven cases of putrid lung abscess are reviewed in regard to incidence and severity of hemoptysis.
2. An hemoptysis incidence of 44 per cent was found with seven deaths from hemorrhage.
3. All fatal hemorrhages occurred in cases with symptoms of abscess of four weeks' duration or longer, suggesting that massive hemorrhage is a manifestation of chronic lung abscess.
4. The incidence of fatal hemoptysis was not influenced by surgical drainage of abscesses of over four weeks' duration.
5. There was no relationship between massive hemoptysis and size or location of the abscess.
6. Lobectomy is felt to be the therapy of choice in lung abscess of over four weeks' duration with hemoptysis.

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THE FORUM

Premature Quadruplets.

Mrs. Charles Henn, Jr., age 26, a British war bride, made her first office visit September 3, 1946. Her last menstrual period was May 2, 1946. Expected date of delivery was February 9, 1947. Usual weight 135 pounds.

PAST HISTORY:

This was essentially negative. She has a child 1½ years old. An appendectomy was performed July 20, 1946, and a gangrenous appendix was removed through a MacBurney's incision. Alas, the ovaries were not viewed. There was no history of multiple pregnancies on either side of the present family.

Mrs. Henn ran a normal prenatal course until her visit November 11, 1946. She had gained 12 pounds since the previous visit. Blood pressure had risen to 145/90. Urine showed a trace of albumen. Present weight 168 pounds. The height of the fundus suggested the time of delivery to be two months ahead of the calendar date. Two fetal hearts were heard, and x-ray examinations revealed a quadruple pregnancy.

The patient entered the hospital immediately and under 6 days of the usual drastic treatment for toxemia, her condition was considered normal. Weight 156 pounds. B.P. 122/70. Urine negative. The next month showed no change in her condition. Treatment during this time consisted of careful watching, plenty of rest, books and tea. A simple low caloric diet was allowed. On December 23, the patient complained of mild indigestion for seventeen hours, accompanied by funny irregular abdominal cramps. During this time the cervix slowly dilated by an amniotic sac. At no time could we feel a presenting part. At 6:30 P. M., a bag of water presented through the vagina. This was ruptured and the babies were born in the following order:

A. Male at 6:45 P. M. L.O.A. This placenta delivered at 6:50 P.M.

B. The second sac was ruptured. Male at 7:04 P.M. L.O.A.

C. The third sac was ruptured. Male at 7:34 P.M. R.S.A.

D. The fourth sac was ruptured. Female at 7:40 P.M. R.O.A.

The three cords and thrice fused placenta were delivered at 7:45 P.M. Apparently the quadruplets are fraternal. All babies cried lustily when born. Due to the rapidity of events no anesthesia was used.

The birth weights were as follows:

Baby A—2 pounds 12 ounces
Baby B—3 pounds 10 ounces
Baby C—4 pounds
Baby D—3 pounds 5 ounces

The mother's course in the hospital was uneventful and she was discharged in 16 days as well.

The babies were placed in incubators and treated very much the same as any premature infant. Six weeks after delivery they weigh 6 pounds or over and are ready to leave the hospital.

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NOTE. Summary of paper to appear in the *Journal of Obstetrics.*

The Ollier-Thiersch Graft.

Surgeons quite generally consider the Ollier-Thiersch graft, a thin graft. Recently the *British Medical Journal*[1] has reprinted translations of the original articles[2] of both of these men and from these it is obvious that those men advocated what we now know as a split skin graft, and which at that time was cut with a razor and included much or all of the entire skin. This idea that an Ollier-Thiersch graft is a thin graft has found its way into the text books[3] to such an extent that it is doubtful if it can be changed. One book bravely stands up for the original meaning, namely, Maxwell Maltz's Evolution of Plastic Surgery, page 259. Possibly one way to resolve this difficulty would be to discontinue using the term Ollier-Thiersch graft.

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Medical Society of Virginia Cancer Committee

Chairman, George Cooper, Jr., M. D.

Room 383, Medical School Building, University, Virginia

Reprints of this and preceding Bulletins may be obtained from this office

March 1, 1947

In the preceding bulletin it was pointed out that approximately half of the cancer deaths in Virginia are from cancers arising in sites which can be readily palpated, or inspected directly or through simple scopes. The situation presents a challenge to every physician in the State. This is no minor matter. As a cause of death, cancer is second only to cardiovascular diseases.

Why should large numbers of people die of cancers, many of which could either have been prevented or detected in a curable stage? There are only two answers.

First, the victims did not seek medical attention for what, in their ignorance, they considered trivial complaints. Many physicians still complain of any effort to educate laymen on the subject of the early signs and symptoms of cancer because such education leads many people, especially neurotics, to annoy their doctors with unnecessary visits. As for the neurotics, it is doubtful that these unhappy souls would reduce their demands on their physicians if they had never heard of cancer. They can be counted on always to find some excuse to ask for sympathy and reassurance. Protection of the unprotectable neurotic minority is no reason to withhold life-saving information from the stable majority. That stable persons seek medical attention for what proves to be insignificant bleeding, cough, hoarseness, etc. is no cause for complaint by the doctor who desires to keep his patients well rather than attend them only in severe illness.

Second, we physicians must face the unpleasant fact that many cancer deaths are due to our failure to look for and correct precancerous conditions, and to diagnose early cancer when it is called to our attention.

Dr. George T. Pack, analyzing 1000 cases of cancer, found that there was no delay in establishing the diagnosis in 21% of the cases. In the remaining 79%, delay was the fault of the patient in 44%, of a physician in 17%, and of both patient and physician in 18%. In this group of 1000 cases, a physician was solely or partly responsible for delay in establishing the diagnosis of cancer in 350 patients.

Sometimes our failure is caused by carelessness, more often by hurried, incomplete examinations. Until new methods of discovering and treating cancer are found, we can hope to check the ever-mounting number of cancer deaths only by examining our patients completely and regularly. This is something for which the average doctor, busy with acute illness, has difficulty finding the time. We need help and we can provide it for ourselves by organizing a county or community cancer detection center through our local medical societies. Such centers have sprung up throughout the country during the last ten years. Their value has been proven. To them are admitted only well people who are not on a regular examination schedule with their family doctor. Examinees are asked to report every six months. At each visit they receive a complete physical examination, plus a blood study, urinalysis, and chest x-ray. If any defects are found, the examinee is referred to his physician or a clinic, depending on his economic status. No investigation or treatment is carried out in the center. Its policies and charges are guided by the local medical society. Any physician who can do a good physical examination is qualified to serve as an examiner. By taking turns in the center, the physicians in a locality can keep it staffed without undue burden on anyone. The results are worth the effort. The last report of the center at the University of Virginia showed that 452 examinees had received 570 examinations. These people all considered themselves well and in no need of medical attention. Yet 6 cancers were discovered, 4 skin epitheliomas, 1 axillary sweat gland carcinoma, and 1 transitional cell carcinoma of the antrum.

In addition to the 6 suspicious lesions, which on investigation by the examinee's physician or in a clinic were proven to be malignant, 155 suspicious lesions have been discovered in 137 other examinees, including 82 cases of chronic cervicitis, cervical erosions, or cervical polyps, 31 abnormal breasts, 14 irritated or suspicious nevi, 16 thyroid nodules, 9 fibroid uteruses, an ovarian tumor (proven benign), a testicular nodule, and a vaginal wall nodule. Though investigation has revealed most of these to be benign and will reveal most of the remaining to be benign, at least a few cancers have been prevented by elimnation of possible sites of malignant degeneration.

MAKE TIME FOR PERIODIC PHYSICAL EXAMINATION OF YOUR REGULAR PATIENTS! HELP ORGANIZE A DETECTION CENTER IN YOUR LOCALITY!

Homan's Surgery. Page 1170.
Horsley and Bigger's Operative Surgery. Page 423.
Oxford Surgery (T. P. Legg) Loose Leaf. **2**: p. 368

E. C. L. MILLER.

Dr. John Peter Mettauer.

Old "Doctor High Hat" some have affectionately called him,
The tall country doctor, made taller still by his ever-present black beaver.
He stood tall, not in inches alone, (and there were many of them)
But in his profession, for he was a good doctor.
He was really a surgeon, but back when he lived,
In the 1800's, you were just—doctor—
No matter what you did.
Yet, Dr. Mettauer was a surgeon, and what a surgeon!
It was he who first used metal sutures for operations,
While others had always used silk.
And he was the first to successfully perform the—
Vesico-vaginal fistula operation,
But we don't have to worry about that now
'Cause it's gone out of style.
Perhaps in his day, folks thought he was a miracle man,
For he healed the cleft palate, and helped the cataract-blinded to see.
You say—That happens every day now!
True—it does.
But when Dr. Mettauer made it happen,
He did it with home-made instruments, and he didn't have
Trained nurses, laboratories, electricity, hospitals . . .
In fact, he didn't have much of anything
But a brilliant mind
And two wonderful hands—
And that's all he needed.
Peter Mettauer was an unselfish man, sharing what he had.
One of the finest things he ever shared was his brilliant mind,
And of that he gave generously.
He established the fourth medical school in the South.
There was quite a curriculum in that school,
The Prince Edward Medical Institute.
Students there studied medicine, surgery, clinical medicine,
Clinical surgery, obstetrics and pathology, materia medica
And therapeutics, and medical jurisprudence.
Prince Edward Medical Institute had quite a faculty too—
Dr. John Peter Mettauer.
Yes, single-handed he taught the student body for ten years,
Until two of his sons joined him, for they had become doctors too.
Oh, Dr. Mettauer had many chidren—13 by count.
And wives? Chivalry was not dead, for he captivated four . . .
Did it all without a lawyer's help, too.
And all those wives, and all those children
Didn't cut his days short a mite, for he lived all the time from
Seventeen hundred and eighty-seven to eighteen hundred and seventy-five,
Eighty-eight full and fruitful years.
Today his spirit roves that country he loved so well,
Prince Edward County, Virginia. And at night,
It comes back to rest in the Hampden-Sydney College Cemetery
Under a tremendous marble monument.
I guess he tips his tall black hat as he floats by,
For he sort-of likes those words carved on it:
"Erected by the Medical Society of Virginia."
Most any night just before daybreak,
Dr. Mettauer holds a medical conference,
For on his right is his son, Dr. Henry Archer Mettauer,
And on his left his father—the fine old gentleman who came to America
With Lafayette—Dr. Francis Joseph Mettauer.
But there isn't a Dr. Mettauer left in America—
John Peter's three doctor sons said their daddy married enough for all of them,
And each died a bachelor.
We hear that the family still exists in Alsace, France,
For the old family servant told us so.
He says over there they are dukes and duchesses—lords and ladies,
He says they're great folks—His Mettauers.

MARTHA TURNAGE,
Radio Consultant to Department of Public Relations, Medical Society of Virginia.

Prize Contest.

The American Association of Obstetricians, Gynecologists and Abdominal Surgeons announces a foundation prize contest.

For further information, write Dr. James R. Bloss, secretary, 418 Eleventh Street, Huntington 1, West Virginia.

MEDICAL SOCIETY OF VIRGINIA

THE COUNCIL
January 16, 1947

The Council of the Medical Society of Virginia met at the Society's office in Richmond on January 16th and was called to order by the President, Dr. William L. Powell of Roanoke. Others present were: Drs. Guy Fisher, President-Elect; Julian L. Rawls, immediate past President; A. Brownley Hodges, first Vice-President; R. B. Bowles, C. L. Harrell, Carrington Williams, J. L. Hamner, W. A. Porter, W. R. Whitman, and A. F. Robertson, Councillors from the first to seventh districts; and Dr. M. P. Rucker, Editor of the *Monthly*.

Minutes of the October meeting of the Council were ordered accepted as printed in the December 1946 *Monthly*.

Business brought forward from the last meeting was next discussed. At that time it was moved that the Committee on Scientific Exhibits secure estimates on some much needed equipment for better displays of the exhibits, with the idea that the Council might at this time make an appropriation for securing the material. Dr. Vincent Archer, a member of the Committee who had been asked to secure estimates, advised that he had not been able to secure definite information to this time but was in communication with several people with regard to it. In view of this, the Council moved that whatever may be needed for securing view boxes for X-ray films up to $1,000.00 be appropriated. Adopted.

A resolution from the Virginia Society for Pathology and Laboratory Medicine and a letter from the American Society of Clinical Pathologists had been referred to the Committee on Ethics, with request that they submit their findings at this meeting. This referred to a letter to physicians practicing in the Medical College of Virginia Hospital with regard to laboratory work on private patients and the offer of "concessions" or "rebates" to physicians referring such work. Dr. Hamner, chairman of the Ethics Committee, stated that he had talked with Mr. Hudgens, director of the Hospital, and he felt the whole matter could be ironed out between the College Laboratory and the State Pathological Society. For this reason, the Committee had no recommendation to make at this time but would make a final report later.

Dr. Powell spoke of the Veterans Fee Scale which had been discussed previously and stated the Committee had its last meeting on January 7th and went over fees. The Veterans Administration now has the fees under consideration for the second time. A matter discussed at that meeting was how to determine which doctors are specialists in cases where veterans have to be referred to specialists in various lines. He felt the local societies would have to pass on this, though he does not think this is necessary until a definite agreement has been completed with the Veterans Administration. It was thought by some that a committee might be appointed in each local society to designate the various specialists.

Dr. Williams was asked about the Veterans Loan Fund which had been placed in charge of a committee composed of him as chairman, with Dr. J. R. Gorman and Dr. A. F. Robertson as other members. Dr. Williams reported that he thought they would have an applicant this winter, but the boy had made other arrangements so they have no prospect at this time.

Dr. Powell spoke of the urgency of having an appointment to the State Board of Medical Examiners for the 6th District to fill the vacancy caused by the death of Dr. J. W. Preston. He and Dr. Whitman, councilor, had communicated with the counties in that district and had secured the three nominations required to be sent to the Governor. They are Dr. J. J. Giesen of Radford, Dr. K. D. Graves of Roanoke, and Dr. Ernest G. Scott of Lynchburg. Although some of those nominated at the State meeting for the 7th, 8th and 9th Districts had indicated they would be unable to serve, it was decided to submit those names together with nominations for the 6th District to the Governor, as the law requires that three names be sent the Governor from each district, from which he may make a choice. The Governor will be advised as to which of the nominees definitely will be unable to accept. The Council at this time approved the nominations from the 6th District.

The question was next presented of an appropriation to the Woman's Auxiliary of the State Society for expenses at their annual meeting and it was moved and adopted that they be given $100.00 or as much thereof as needed for their expenses at that time. It was stated this could be taken care of from money received for commercial exhibits.

With regard to a joint meeting with the West Virginia State Medical Association, Dr. Powell said he had talked with Mr. Hyde, manager of Hotel Roanoke, who had taken up this matter with the Hotel Association of Roanoke. They reported on the rooms available at their various hotels, which they said would be ample for the Medical Society of Virginia but felt many doctors would be forced to accept uncomfortable accommodations for a larger attendance. It was decided that a joint meeting would not be feasible in Roanoke, and motion was offered by Dr. Porter, seconded by Dr. Harrell, that the President express the regret of the Society that the joint meeting cannot be arranged at this time as accommodations are not available. Carried.

Dr. Powell said he had communicated with the members of the Council, stating the dates available at Hotel Roanoke for the State meeting, and they had been set as October 13, 14, and 15, in accordance with the majority vote.

The secretary brought up the question as to the 1947 meeting being the Centennial meeting of the Society. Though there have been several gaps in years of meeting, this will be the 100th time of meeting since organization of the Society in December 1820. Dr. Rucker, being asked if he felt the Society would be justified in calling this its Centennial meeting, stated that in view of the investigation he and the secretary had made several years ago, he felt this should be the centennial meeting. Dr. Fisher felt something special should be arranged for the meeting and Dr. Williams moved that Dr. Rucker and Dr. Wyndham Blanton, as outstanding historians of the Society, be appointed a committee to arrange for such a program, with Dr. Blanton as chairman. This was seconded and carried.

Dr. Powell had a report from the meeting of the Public Relations Committee held January 7th. This brought out the urgent need of having active District Councils, and it was requested that each Councilor see that such a Council is appointed in his district and send names to Miss Edwards The secretary said there had been District Councils appointed several years ago but their work had been principally with the Legislative Committee. Dr. Hamner said he had used his Council all during the war and could not have accomplished what he did in his district but for it. Dr. Powell stated that, although the report from the Public Relations Committee is not yet ready for publication, he would ask the secretary to read it that the Councilors may be informed as to what is being proposed. After the presentation it was asked if the Council should vote on this. Dr. Powell replied that the Committee has power to act but the report was brought to the Council for suggestions.

Dr. Bowles asked if it might be well for the Public Relations Committee to issue a bulletin once a month to keep members advised as to what is going on. Dr. Robertson felt that such a report might be included in the *Monthly* rather than as a special bulletin, if agreeable to Dr. Rucker, who said he would be glad to publish the reports. Dr. Robertson also suggested that Mr. Johnson notify the Councilors when he expects to visit the county societies so they may be present.

At this time, Dr. Powell appointed a Budget Committee composed of Dr. Williams, Chairman, and Drs. Whitman and Harrell, advising them that they should prepare and present a budget for the annual meeting of the Council. They might arrange to discuss this on the Sunday evening prior to the meeting.

Dr. Powell said the Society has two delegates to the American Medical Association for whom the Society has been paying actual railroad and Pullman fares. These men attend the meetings and work hard and he felt some additional part of their expenses should be covered. It was suggested that the delegates be allowed a per diem while attending the A.M.A. meetings. Following discussion, a motion was made and seconded that the Council appropriate sufficient funds for the delegates attending the meeting in June to meet their expenses, up to $10.00 a day, including travel time, in addition to the transportation. This was adopted.

The secretary said Dr. Hutcheson had advised that he and Dr. Mulholland had not yet completed their report of the December meeting of the House of Delegates, and she was instructed to publish it in the *Monthly* as soon as possible after its receipt.

As the next meeting of the American Medical Association is to be an unusual event and will meet nearby, Dr. Powell suggested that the Council might authorize the secretary and assistant secretary to attend. This was approved by the Council.

The secretary presented the following letter received from the last secretary-treasurer of the Piedmont Medical Society:

"At the last meeting on June 6, 1946, of the Piedmont and Albemarle County Medical Societies, the question arose as to the advisability of continuing the Piedmont Medical Society.

"It was brought out that the Piedmont Society was started some years back when there were no county societies in the adjoining counties.

"Today, most of these counties have their own societies. The majority voted that the purpose of the Piedmont Society no longer existed.

"Inclosed is my check for $20.84, balance in treasury. Under separate cover I am mailing you the book of minutes and other papers.

"I was advised that these should be mailed to you, as property of the state society.

Yours very truly,
E. D. DAVIS, JR., *Sec.-Treas.*"

To this, she had replied:

"Naturally, I would not wish to turn down a gift to the Society, if that was the intention of your members, but there was no reference made to it in your last minutes. As your membership was largely composed of the Albemarle County Medical Society, we are wondering if the check should have been sent to them instead of the State Society. We are holding the check and would appreciate your discussing this with some of the members and letting us know your wishes in the matter."

Not having heard further from Dr. Davis, she asked for instructions. It was moved and carried that the Society file the minutes and accept the check with thanks.

Dr. Powell next presented the following letter from Dr. E. P. Lehman:

October 17, 1946.

DEAR DR. POWELL:

I am putting in writing the matter I discussed with you on Monday in regard to the method of nominating Councilors for election by the Society with the suggestion that it he referred to the Judicial Committee for consideration of incorporation in the by laws of the Society. I am sending a copy of this letter to Dr. Fisher and to Miss Edwards.

When the President of the Society announces that the delegates of the districts which are to elect new Councilors shall hold a meeting and agree on a nomination, and when he then calls a recess for this purpose, a great deal of confusion immediately supervenes. I have been a delegate on a number of occasions and have always been cognizant of the inefficiency of the method, and I am not alone in this conclusion In the first place, no set place is assigned as a rendezvous for the delegates from each district, the result of which is that there is much calling

back and forth across the hall in attempts to collect them. There is no assurance that all delegates present from the districts are brought together. In the second place, there is no possible way for those who are brought together to know whether or not all present are duly constituted delegates. In the third place, it is quite possible that a Councilor who is up for reelection may be a delegate and vote, a situation which is obviously improper.

The election of a Councilor is an extremely important matter in the life of the Medical Society of Virginia, and I feel strongly that it should be formalized and regulated so that it can proceed efficiently and with the very least political pressure. I would like to suggest, therefore, the following procedure:

(1) That the secretary furnish to the president at the first meeting of the House of Delegates a list of all delegates and alternates from each component society. Any substitute delegate not on this list should make his credentials known to the secretary before the meeting and the necessary substitute be placed on the list given the president.

(2) From this list the president will appoint a secretary from each district to whom he will furnish the amended list of delegates from his district. The duties of the secretary will be (a) to check the delegates present against the list and thereby assure himself that no votes are cast without proper authority; (b) to preside at the opening of the district meeting and to call for the election of a chairman who will take over the meeting; (c) to report the results of nomination at the succeeding meeting of the House of Delegates.

(3) At the time of recess the president shall designate a corner of the hall in which each of the districts shall hold its meeting. It would not be undesirable for him to read the list of accredited delegates who would meet at the designated point.

(4) A definite provision should be made in the by laws that no Councilor who is up for reelection shall act as delegate even though elected by his component society, and that he shall be forbidden to attend the meeting of his district.

I believe that the evils now resulting from the present methods could be abolished by some such mechanism, and I sincerely hope that the Society will agree.

Looking forward to your regime as president and with kindest personal regards, I am

Sincerely yours,
EDWIN P LEHMAN, M. D.

It was moved and carried that this letter be referred to the Judiciary Committee, after which recess was taken for lunch. Resuming business, Dr. Powell introduced Dr A. L. Carson, Jr., who represented the State Health Department in the absence of Dr. L. J. Roper, who was sick.

Dr. Carson stated that the Health Department had received a request from the Governor to do something about the health of school children, and the plan proposed by the Health Department had the endorsement of the State Department of Education. This would be in line with that in regard to prenatal and preschool clinics. With the approval of this Council, they wish to use a cross section of the State to hold diagnostic clinics for school children with a view to expanding the work if it seems desirable. Conditional funds have been released for this purpose, but no money had been given for correction of defects.

Dr. Robertson expressed appreciation of the way the Health Department bring such matters to the doctors and expressed approval of their plan. Dr. Harrell asked what would be done about correcting defects, to which Dr. Carson replied they would do everything possible to refer the children to their family physicians, and would do the best they could in regard to indigent cases. They hope to be in position to show the next General Assembly what is done or can be done. The counties of Loudoun, Hanover, Elizabeth City, Mecklenburg, and Smyth have been selected for this work. The Council expressed its appreciation and approval of the plan presented.

The secretary said she had received inquiries from several members as to how to interpret the number of years of license in deciding amount to be paid for dues. It was stated that this should not be determined by time doctors were granted certificates from the State Board of Medical Examiners, but by the time they first registered these certificates with the county or city for the practice of medicine, as it was stated that many young doctors did not register for practice at once, due to internship, recent service with the armed forces, etc. The By-Laws provide for exemption from dues for members over seventy years of age, upon their request. In the case of members under seventy, where the payment of dues seems to work a hardship, the secretary was instructed to ask for a ruling from the respective councilors.

At this time, Dr. Powell called attention to the question of Fellowship in the American Medical Association as this was not plain to many He stated that upon enrollment of a member in his State Society, he automatically became a member of the A. M.. A., but if he wished Fellowship, he had to send a special request for it, but it cost no more than subscription to the Journal of the Association. He suggested that doctors should check to see their status with the A. M. A.

Dr. Rawls, chairman of the Department of Clinical and Medical Education, said at their recent meeting, Dr. Cooper, chairman of the Cancer Committee, suggested that the Department put on post-graduate work on the subject of cancer if the money and time were available. They had discussed the feasibility of three or four day courses in Charlottesville and Richmond at the medical schools, but were fearful that doctors would not take that much time from their work for one subject. In place of that, he had written to Isle of Wight, Nansemond and Southampton Counties to see if they would be interested in holding an all-day clinic in Suffolk for both white and Negro physicians. Dr E. C. Joyner, president of the Nansemond County Medical Society, felt this could be arranged in Suffolk, and the first clinic is in the making. The next place which had been suggested was perhaps Warsaw or Tappahannock for the Northern Neck area. If the response is good in these two, an effort will be made to spread out. It is planned to have these as didactic courses but they would be glad to have clinics if they can pick up some cases. This was stated for the information of the Council and the members thought the plan excellent.

In view of the fact that the 1947 meeting is to be

the Society's centennial meeting, Dr. Rucker asked what character of program the Society would wish. Dr. Hamner suggested giving over part of the program to general practice but not to have it at the end as several members had told him they were unable to stay for last year's section on general practice. The question was also asked as to having two sections. Dr. Rawls said that frequently medical men wish to hear the surgical discussions and *vice versa*. Dr. Porter asked if there were any way speakers could be taught to use the loud speakers as frequently part of the talks could not be heard. It was thought that lapel loud speakers might remedy this trouble. The question was also asked about having discussions of all papers in one session at lunch but it was thought impracticable to try this as the membership is frequently scattered at lunch time.

Adjournment folowed.

AGNES V. EDWARDS,
Secretary.

Approved:
W. L POWELL,
President.
January 25, 1947.

MEDICAL SOCIETY OF VIRGINIA PUBLIC RELATIONS

Medical Society Launches Public Relations Program.

A well-rounded, five-point public relations program for the Medical Society of Virginia is being set in motion as the result of a highly constructive conference sponsored by the Public Relations Committee at the Hotel John Marshall in Richmond on Thursday, December 19, 1946.

Participating in the conference, at which public relations objectives and desirable methods of attaining them were thoroughly discussed, were members of the Council of the Medical Society of Virginia, representatives of local medical societies and the Woman's Auxiliary of the State organization, as well as consultants on the press and radio.

With Mr. Henry S. Johnson, the Medical Society of Virginia's Public Relations Director, presiding, the conference covered a prepared agenda, salient features of which were discussed in detail by guest consultants. The entire conference followed the general pattern outlined by the Ten-Point Program of the American Medical Association and centered more specifically upon the Five-Point Program of the Medical Society of Virginia. The Five-Point Program was adopted in May, 1946, by the Council of the Medical Society of Virginia and first carried in the *Virginia Medical Monthly* of last July.

Taking part in the program were Mr. Thomas A. Hendricks, Public Relations Representative of the American Medical Association, and Mr. Hugh Brenneman, Director of Public Relations for the Michigan State Medical Society. Consultants addressing the gathering included Mr. Walter Bishop, Public Relations Director, and Mr. Barron Howard, Business Manager, both of Radio Station WRVA; Mrs. Martha Turnage, Radio Script Specialist, formerly with WRVA; and Mr. M. W. Armistead, III, Executive Secretary and Public Relations Adviser to the Governor of Virginia, who discussed the role of the press.

Mr. Dowell Howard, Assistant State Superintendent of Public Instruction, discussed the relationship between public education and the medical profession and ways in which they might cooperate in an educational program.

An outline of the progress and plans for extension of prepayment hospital and medical service was given by Dr. William R. Pretlow of Warrenton, President of the Virginia Hospital Service Association; Mr. M. Haskins Coleman, Jr., of Richmond, Executive Secretary of the Blue Cross; and Mr. A. Fred Noyes of Richmond, Enrollment Manager of Blue Cross and Blue Shield.

An active part in the conference was taken by Dr. W. L. Powell of Roanoke, President of the Medical Society of Virginia; Dr. M. Pierce Rucker of Richmond, Editor of the *Virginia Medical Monthly;* and Miss Agnes V. Edwards, Executive Secretary of the Medical Society of Virginia.

Approximately sixty-five physicians, representing a large percentage of the local medical societies, attended the conference, many of whom expressed the view that this type of conference, as a means of advancing a proper and progressive public relations program, should be held annually and some even advocated such meetings semi-annually.

A positive approach to public relations objectives was emphasized at the all-day session, at which major points of the program were explained by consultants and discussed by those attending. A marked degree of enthusiasm for a concrete, intelligent and aggressive but dignified program was evidenced among the conferees.

Among the objectives of the program discussed on the conference agenda were:

(1) The advantages of the present system of personalized private medical practice.

(2) The disadvantages and inherent dangers involved in plans for government-controlled or dominated plans of "socialized" medical practice.

(3) Efforts and plans developed by the medical profession to extend medical care to persons not now receiving adequate medical attention.

(4) Problems confronting the medical profession, such as shortages of doctors, nurses, hospitals, clinics, etc., and likely avenues of approach to the solution of these problems.

(5) Developments in medical science.

(6) The importance of prepayment medical care plans.

The necessity for personal contacts was emphasized. In implementing and making effective a public relations program, it was stressed these personal contacts must be pursued not only by the Society's Public Relations Director but by individual physicians and selected lay leaders possessing an understanding of the objectives and problems of the medical profession. The value of the activities of local medical societies in advancing a public relation program was also underlined, and contacts with members of local, state and federal legislative bodies, both by individuals and groups of the medical profession, were represented as being of vital importance.

It was suggested to the conference that these media be used for disseminating information:

(1) Civic, fraternal, cultural and church groups, etc., through addresses, conferences, discussions, question-and-answer programs, and so forth, led by individual physicians, representatives of state and local medical societies, and outstanding visiting members of the medical profession.

(2) The press, including daily and weekly newspapers, as well as periodicals such as trade and cultural publications.

(3) The radio, through news releases and a variety of programs designed to disseminate information in a manner attractive to the listener.

(4) Educational forces.

(5) Motion pictures.

The day's agenda was summarized at the end of the program by Dr. Walter B. Martin of Norfolk, Virginia's representative on the Council of Medical Service and Public Relations of the American Medical Association and by Dr. J. M. Emmett of Clifton Forge, Chairman of the Public Relations Committee of the Medical Society of Virginia.

Various suggestions were made at the conference as to the vital part to be played in the public relations program by members of the Council, District Councils, local medical societies, and the Public Relations Director, and plans are now being put into operation to organize the program thoroughly on a state-wide, coordinated scale.

Follow-up meetings on the local level, with the Public Relations Director in attendance, probably will be the sequel to the state conference. This course was advocated by numerous persons attending the meeting.

The conferees enjoyed a luncheon in the Marshall Room, at which informal discussions continued.

Public Relations Organization.

Our Public Relations Program with the Medical Society of Virginia has been under discussion for several months. In addition to meeting with component societies desiring to discuss this, and our state-wide Public Relations Conference, December 19, the Public Relations Committee has been diligent in approaching the matter of organizing and inaugurating a Public Relations Program.

Members of the Council of the Medical Society of Virginia have, in many instances, already sent in a list of members of their respective District Councils. These, in some cases, may need some up-to-date revisions. The Director of Public Relations is working with the Council on this particular item as a very essential one, and it is hoped that in the near future this may be complete.

One need not even suggest the importance of an organization if a program is to be properly administered and carried out. The members of the Public Relations Committee, the Councilors, and the Office of Public Relations need and earnestly solicit your cooperation with all concerned in order that we may go forward with our "Five-Point Program" as soon as possible.

If this is to be done, one of the most fundamental things, of course, would be the adherence to Section 7 of Article 8 of the By-Laws of the Medical Society of Virginia, which is as follows:

"Each Councilor District shall have a District Council composed of members from each county, the State Councilor of that district to act as chairman. The purpose of these District Councils is to bring the individual physician of the county in closer contact with the Society and its needs."

It is earnestly hoped that we shall, very soon, have a complete list of those referred to in this section of the By-Laws and that these members of the District Council may serve their respective medical societies and counties as a member of the District Council and Public Relations Representative.

If our program is to be properly organized and attains the objectives we hope, it is essential that we shall have at least one doctor in every medical society and at least one doctor in every county in the state who will understand what we are trying to do and who will help us in the accomplishment of this.

A.M.A.'s President Visits Virginia.

Dr. H. H. Shoulders of Nashville, Tennessee, President of the American Medical Association, was a recent visitor in Virginia. His host—the Peninsula Academy of Medicine. The Academy, consisting of doctors from Elizabeth City County, Hampton, Phoebus, Newport News and Warwick, brought Dr. Shoulders to Newport News as the third speaker on the forum provided by the Institute of Public Affairs and arranged by the Junior Chamber of Commerce of Newport News. Dr. Robert H. Wright, Jr., of Hampton, is President of the Academy.

A.M.A.'s president was entertained at a dinner at the James River Country Club by the Academy, their

wives, and many others of the Hampton Roads area and was also the guest of honor at a reception following the lecture on "Socialized Medicine" which was delivered before a capacity crowd at the high school auditorium at Newport News.

The following day he was escorted through the Mariners Museum at Hilton Village by Mrs. Waverly Payne of Newport News, and accompanied on a tour of Colonial Williamsburg by Henry S. Johnson, Director of Public Relations, Medical Society of Virginia.

The photographs were provided by Mr. Gerald H. Bath, Director of Public Relations of Colonial Williamsburg, as one of their many courtesies of the day.



Dr. Shoulders is pictured in the Library of the Colonial Governor's Palace.

Public Relations and Local Medical Societies.

The Public Relations Committee of the Medical Society of Virginia in recommending a Public Relations Program, believes that the local medical societies should know that the Director of Pubic Relations would be glad to visit with them whenever possible to discuss the program.

In July, 1946, a letter to this effect was sent to all the Component Medical Societies and on January 17, 1947, a follow-up letter was sent to those societies that had not been heard from.

The Director of Public Relations has already met with approximately twenty-five Component Medical Societies, four District Medical Societies, and with a number of hospital staffs. He has talked with doctors representing approximately seventy-five counties and cities in the state.



Dr. H. H. Shoulders, President of the American Medical Association, at the beginning of his tour by way of Colonial transportation, Williamsburg.

Any medical society desiring to have a discussion of Public Relations is requested to communicate directly with Mr. Henry S. Johnson, Director of Public Relations, at 1200 East Clay Street, Richmond 19, Virginia. He is also available, if possible, for any meetings on which you wish to schedule him with lay groups.

PUBLIC HEALTH

L. J. ROPER, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for January 1947, as compared with the same month in 1946, follows:

	January 1947	January 1946
Typhoid and Paratyphoid	3	7
Diarrhea and Dysentery	151	105
Measles	496	540
Scarlet Fever	163	266
Diphtheria	37	63
Poliomyelitis	4	1
Meningitis	10	36
Undulant Fever	0	2
Rocky Mountain Spotted Fever	0	0
Tularemia	16	17

ROCKY MOUNTAIN SPOTTED FEVER
PREVALENCE AND MORTALITY IN VIRGINIA WITH SPECIAL EMPHASIS UPON PREVENTION

During 1946 there were reported in Virginia 92 cases with 14 deaths from Rocky Mountain Spotted Fever. This represents a slight decrease in cases over the previous year, in which 99 cases were recorded. Improvement is noticeable in mortality since 21 deaths occurred in the 1945 group of cases. The totals for the seven-year period 1940-1946 reveal cumulative figures of 454 cases and 91 deaths, a case fatality of 20.0 per 100 cases. The number of cases distributed through the nation during 1946 is not yet available, but in each of the two preceding years the case load in Virginia far exceeded that of any other State. Since 1939 the disease has appeared in 83 of the 100 Virginia counties, with sporadic concentration varying from year to year in certain areas.

While this situation is not too alarming, the increasing prevalence with an attending 20 per cent mortality rate demands attention. As is now well known, Rocky Mountain Spotted Fever is transmitted to man in the Eastern United States through the bite of an infected wood tick. It is, however, recognized also that comparatively few tick bites are followed by disease, and that apparently a margin of safety of several hours exists after attachment of the tick before the bitten area is infected. Eradication of these insect vectors remains impossible at present and control efforts must be diverted toward individual protection. It, therefore, appears necessary to outline the general and specific modes of prevention.

I. GENERAL MEASURES OF CONTROL

1. Avoid infected areas during the tick season (April through September).
2. Destroy weeds, tall grasses and low shrubbery adjacent to frequently traveled pathways.
3. When occupation necessitates frequent contact with tick infested areas
   a. Wear smooth, sturdy clothing fitted tightly about ankles, wrists and neck. High leather or rubber shoes are desirable.
   b. Examine body carefully at least once daily for ticks, paying particular attention to warm, moist and hairy body areas.
   c. If ticks are found they should be carefully removed. Hands should be protected and the tick withdrawn by grasping its head firmly with thumb forceps. In instances where the tick head is deeply imbedded it may become necessary to dissect the head out. It is recommended that the bitten area be immediately cauterized, using fuming nitric acid, strong carbolic or tincture of iodine. This may generally be safely accomplished by surrounding the bite with petroleum jelly and applying the cauterizing agents through a sharply pointed cotton tipped applicator.

II. SPECIFIC MEASURES OF CONTROL

1. Two types of Rocky Mountain Spotted Fever vaccine are available and both offer high levels of protection. One of these, the tick-tissue vaccine, is used where there is evidence of allergy to egg protein. Chick-embryo vaccine is used more commonly, but must never be used when sensitivity to egg protein is suspected or known. These vac-

cines are made available for free distribution to all Virginia physicians through the State and local health departments, and are intended for those constantly exposed to tick infestation—those who live or work in areas where Rocky Mountain Spotted Fever has occurred or is occurring.

2. Vaccine should be refrigerated but not frozen, and never given after expiration date on the biological.
3. Those requiring protection should receive vaccine in the late winter or early spring, well in advance of the tick season.
4. Protection is conferred for only one tick season and should be repeated each year.
5. Three injections given subcutaneously of chick-embryo or tick tissue vaccine are recommended at 7-10 day intervals.
6. The following dosage schedule is recommended:
   a. Ten years and over—3 doses of 1 cc. each.
   b. Five to ten years—3 doses of 0.5 cc. each.
   c. Under five years—2 doses of 0.5 cc. each, 10 days apart.
7. Vaccination after tick bite occurs is not recommended.
8. Local reactions may occur and occasionally general reaction lasting to 4-8 hours. Both vaccines contain protein, and anaphylactic reactions may occur with individuals allergic to egg or to tick tissue.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President—Mrs. J. E. Hamner, Petersburg
President-Elect—Mrs. J. L. DeCormis, Accomac
Recording Secretary—Mrs. M. H. Harris, West Point
Corresponding Secretary,
Mrs. Meade Edmunds, Petersburg
Treasurer—Mrs. Reuben Simms, Richmond
Editorial Chairman—Mrs. E. Holland Trower, Eastville

Jane Todd Crawford Memorial Fund.

After many years of planning and investigation, the Woman's Auxiliary to the Southern Medical Association has established a definite and most suitable memorial to Jane Todd Crawford. The following resolution has been passed:

"That the Jane Todd Crawford Memorial Fund be used as a loan to help medical students or physicians from the south desiring to do post-graduate work in gynecology, the said students or physicians to be recommended by the dean of the medical school of which they are in attendance, or by the local medical society of which they are a member and approved by a committee of three elected by the Executive Board of the Woman's Auxiliary to the Southern Medical Association."

The name of Jane Todd Crawford is not a new one but one that has long been associated with the early development of abdominal surgery and the beginning of an entirely new era in the practice of medicine.

Jane Todd was born in Rockbridge County, Virginia, in 1763, later in life marrying Thomas Crawford and moving to Kentucky. It was in Green County, Kentucky, that Dr. Ephraim McDowell, coincidentally born in Rockbridge County, Virginia, in 1771, and also removed to Kentucky, was called to diagnose her case. The local physician believed her condition due to pregnancy but Dr. McDowell made the correct diagnosis—a large ovarian tumor.

Dr. McDowell explained to Jane Todd Crawford the necessity of removing the mass not only to give her relief but also to prolong her life. He stated plainly that the operation would be an experiment which had never before been successfully performed but one on which he was willing to stake his reputation if she were willing to bare her flesh to the knife. This courageous woman readily agreed to submit to the experiment and several days later rode sixty-five miles on horseback to Dr. McDowell's home. Thus on Christmas Day, 1809, was performed the world's first ovariotomy which in the passing of years has been the means of saving and restoring to usefulness countless women's lives.

It must be remembered that the operation was performed without the oblivion of anesthesia and that this pioneer woman had only the solace of her prayers to lessen the searing pain of the knife.

Few women today would agree to undergo such an operation as did Jane Todd Crawford, but all now have the opportunity to aid in the saving and prolonging of future women's lives by contributing generously to the Jane Todd Crawford Memorial

Fund, thereby enabling students of gynecology to further their knowledge in this important field.

JESSIE LEE S. SCHERER (MRS. J. H.),
Chairman, Jane Todd Crawford Memorial Fund.

NOTE. It is suggested that this article be kept for future reference.

National Auxiliary Meeting.

Haddon Hall will be the headquarters for the Annual Meeting of the Woman's Auxiliary to the American Medical Association, which will be held in Atlantic City, New Jersey, June 9-13, 1947.

Requests for reservations should be sent immediately to Dr. Robert A. Bradley, Chairman, Subcommittee on Hotels, 16 Central Pier, Atlantic City, New Jersey.

The Auxiliary to the Mid-Tidewater Medical Society

Met in West Point on January 28th, with Mrs. Paul Pearson presiding.

Election of officers was held, the following being named: President, Mrs. M. H. Harris, West Point; vice-president, Mrs. E. L. W. Ferry, Millers Tavern; and secretary-treasurer, Mrs. W. H. Hosfield, West Point.

Mrs. J. E. Hamner, State President, gave the highlights on the Chicago Convention; Mrs. Fletcher Wright, Chairman of Leigh-Hodges-Wright Memorial, told about the splendid work her committee is doing; Dr. Matilda Chalkley, President of Richmond Auxiliary and Cancer Chairman of the State, gave an outline of her plans and of the work of her Auxiliary; Mrs. P. M. Chichester, Chairman of Organization, spoke briefly.

Four new members joined at this meeting, and renewed interest is anticipated.

ELIZABETH S. HARRIS (MRS. M. H.)
President.

Auxiliary to Richmond Academy of Medicine.

At the Meeting of the Auxiliary on January 17th, Judge James Hoge Ricks of the Juvenile and Domestic Relations Court, spoke on "Juvenile Delinquency". He was introduced by Mrs. George Vaughan, Program chairman. Mrs. Charles Edwards, Luncheon chairman, was assisted by Mrs. R. W. Vaughan and Mrs. C. E. Llewellyn.

MYRTLE G. MORTON (MRS. W. R.)
Publicity Chairman.

BOOK ANNOUNCEMENTS

Books received for review are promptly acknowledged in this column. In most cases reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Health Insurance in the United States. By NATHAN SINAI, Dr. P. H.; ODIN W. ANDERSON; and MELVIN L. DOLLAR, School of Public Health, University of Michigan. New York, The Commonwealth Fund. 1946. xvi-115 pages. Cloth. Price $1.50.

Music in Medicine. By SIDNEY LICHT, M.D., Fellow, New York Academy of Medicine. New England Conservatory of Music, Boston, Massachusetts. 1946. xx-132 pages. Cloth. Price $3.00.

The Compleat Pediatrician. Practical, Diagnostic, Therapeutic, and Preventive Pediatrics. By WILBURT C. DAVISON, M.A., D.Sc., M.D., Professor of Pediatrics, Duke University School of Medicine, and Pediatrician, Duke Hospital; Formerly Acting Head of Department of Pediatrics, The Johns Hopkins University School of Medicine; etc. Fifth Edition. Duke University Press, Durham, North Carolina. 1946. vii-256 pages. Cloth. Price $3.75.

The Diagnosis and Treatment of Bronchial Asthma. By LESLIE N. GAY, Ph.B., M.D., Assistant Professor of Medicine of the Johns Hopkins University School of Medicine; Director of the Allergy Clinic of the Johns Hopkins Hospital. With a foreword by WARFIELD T. LONGCOPE, A.B., M.D., Professor of Medicine of the Johns Hopkins University School of Medicine; etc. Baltimore, The Williams and Wilkins Company. 1946. ix-334 pages. Illustrated. Cloth. Price $5.00.

To have a book on asthma open with the physiology and pathology of respiration is refreshing. There is need for re-emphasis on the physiological approach in this disorder. Asthma cannot be adequately viewed with the narrow immunological simplicity so fruitful in the problem of hay fever.

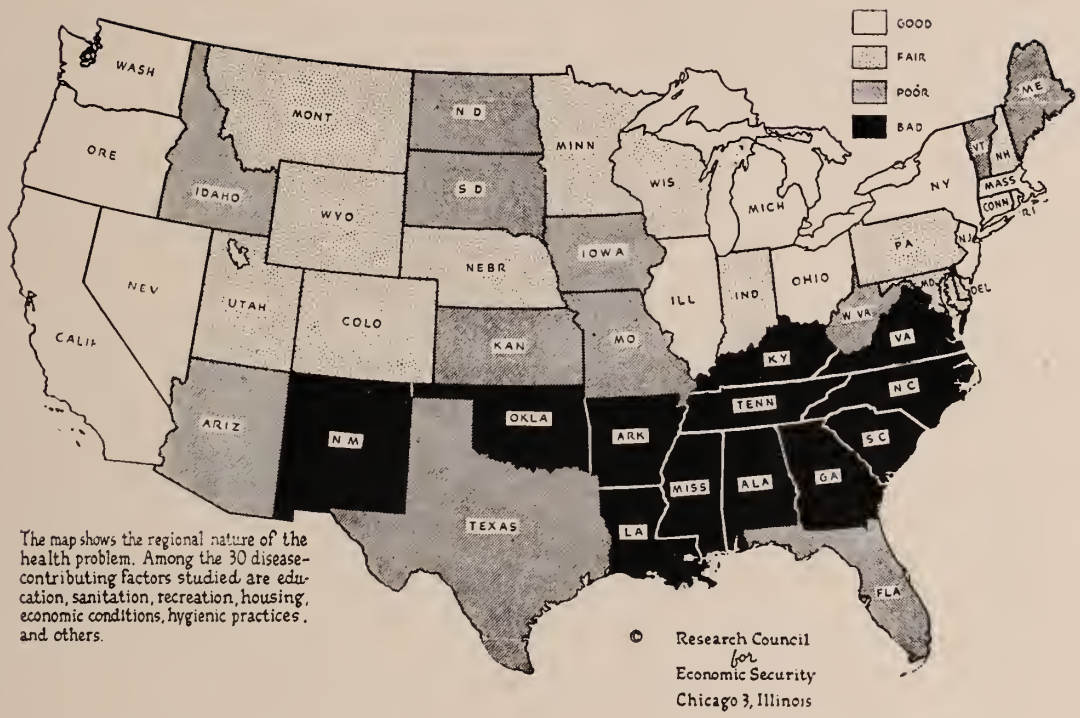
The chief value of this work lies in the case histories and handlings. There are discussions of helium therapy, exercise procedures in asthma, Bermuda as a haven for grass- and ragweed-sensitive persons, the radium treatment of lymphoid tissue residuals in the nasopharynx, treatment by bilateral resection of the pulmonary plexuses, as well as the more usual topics.

The book has defects in organization and omits some concepts essential for a beginner. It is not recommended for medical students or those without a background knowledge of allergy. The views of an outstanding clinical investigator will surely be worthwhile to those specially interested in the field.

M. E. B. OWENS, JR.

EDITORIAL

Our National Health Problem



Prepaid Medical and Hospital Plans

PREPAID Medical Care and Blue Cross Hospitalization Plans are two factors that enter into the Research-Council-for-Economic-Security's picture of our National Health Problem. In 1943 three in every 1,000 Virginians were covered by prepaid medical care plans. Whereas, in Oregon 159 persons in every 1,000 were subscribers to such plans and in the state of Washington 146 persons in every 1,000 were covered. Alabama and Michigan each had 100 subscribers per 1,000 population and California 89, whereas Connecticut, Iowa, and Massachusetts had only two persons with such coverage in every 1,000 population. These figures are not as significant now as they will be in a future survey. At the present time they indicate, more than anything else, where the pioneering in this important health service took place. Virginia now has 115,000 enrolled or 4.1 per cent per 1,000 population, and ranks 8th among the states in percentage of enrollment.

The figures used by the Research Council for Economic Security for the Blue Cross Hospitalization Plans are the enrollments as of July 1, 1945, based upon population estimates of 1943. This gave Virginia a percentage of 7.2. The highest percentage of enrollment in Blue Cross plans was that of Rhode Island, 41, with Delaware a close second with 39.7. Eighteen of the 42 states for which figures are given have a lower percentage of enrollment than Virginia. Virginia now has a percentage of enrollment of 11 per cent and ranks 25th among the states.

The enrollment in the Blue Cross Hospitalization Plans reflects the health consciousness of the population more accurately than does enrollment in prepaid medical care plans for the reason that there has been sufficient time for the Blue Cross Plans to have become standardized. Allowance still must be made for the percentage of rural population. It is physically more difficult to enroll the rural population than it is to enroll the employees of a great industrial plant, and one of the great problems of our National Health Problem is to devise ways and means of extending the benefits of these plans to our rural population.

Physicians in Civilian Practice During War Urged to Reply on New Questionnaire

PARALLEL with the advance of scientific warfare there has been a rapid advance in scientific medicine in the Twentieth Century. The huge strides made in our ability to destroy life and health in the recent war, however, have left many problems which remain to be solved. One of the most critical problems, as recognized by the House of Delegates of the American Medical Association in its December meeting, is that of providing care for the civilian population in the event of another national emergency.

The medical profession is wisely assuming its obligation to the American people to be prepared with facts and recommendations for any such future emergency. As a first step in this preparation, 5,000 questionnaires have gone out to a list of physicians, selected at random, who passed the recent war years in civilian practice.

On the basis of the answers to these questionnaires, sent out by the Committee on National Emergency Service of the A.M.A., it is hoped that facts may be determined as to how the civilian population was served in World War II. The questionnaires also provide an opportunity for those who were responsible for civilian care in those years, to indicate what changes should be made in the mobilization of medical service in future emergencies.

Five thousand questionnaires represents a very small percentage of the total number of physicians who remained in civilian practice. Dr. Edward L. Bortz, Philadelphia, chairman of the Committee on National Emergency Service, has appealed to every physician receiving the civilian questionnaire to respond promptly. The accuracy of the facts obtained and the soundness of the conclusions made by the study will be determined to a great degree by the cooperation which those receiving the questionnaire give the committee.

The committee received excellent cooperation from the 50,616 former medical officers who were mailed questionnaires last December on their experience in military service. These are now being analyzed and studied. The facts obtained will be used as a basis for recommendations to be made by the Committee in June to the House of Delegates.

With the cooperation of the 5,000 physicians who are now receiving questionnaires on their civilian experience, the committee will be able to complete the total study of how the medical profession can best serve our population, civilian and military, in the event of a future national emergency.

Every physician receiving one of these questionnaires has a professional and humanitarian duty to perform in completing it and returning it promptly. It is preferred that each sign his name, but if anyone wishes to remain anonymous, he may do so. The important thing is to get as broad a representation of facts, experiences, and opinions as possible.

Misinformation About Crawford W. Long, the Discoverer of Anesthesia

RECENTLY your editor had an opportunity of visiting the Crawford W. Long region. With Hugh Young's article (*Bull. Hist. Med.* 12:191, 1942) fresh in our mind, it seemed it would be an easy matter to see the building in which the first surgical anesthesia was used, the monument to Dr. Crawford W. Long in the village square, the house in which he was born, the shaft erected to Long in 1926 at his birthplace, the monument beside the court house near his birth place, the house in Athens in which he lived in his maturer years, his portrait in the alumni hall of the University of Georgia, where he received his A.M. degree when it was Franklin College, and finally his grave.

We approached Jefferson from Atlanta and were told by a filling station attendant that the site of Dr. Long's office was now occupied by a grocery store at the northeast corner of the square. The attendant stated further that the office had been torn down, which was just as well as *the operation* was performed out of doors in front of the office. The grocery store is a two story brick house painted green. Across the second story in faded pink letters on a dirty white background is the name of Crawford W. Long. Two tablets beside the front of the store make known the fact that on this site was performed the first operation under surgical anesthesia. One tablet is bronze and the other marble. Both tell the same story. In the village square are two shafts, one to the Confederate soldier and the other, the gift of Dr. L. G. Hardman and other doctors of Jackson County, is to the memory of Dr. Long.

At Athens, we began our search on the old campus of the University of Georgia. We asked a group of students, one girl and two boys, the way to the alumni hall. They knew of no such building, nor had they seen any portrait of Crawford W. Long. One of the boys went to the office and came back with the information that the portrait was in Memorial Building. The girl said she knew where Dr. Long had lived for she had lived in the same house when it was used as a sorority house. It was 165 Waddell Street.

A little further on a gentleman whom we took to be a professor pointed out to us the location on the campus of the monument to Long and confirmed the report that the portrait was in Memorial Building. He seemed quite interested in our curiosity in regard to Long, and volunteered the information that Long had received no formal medical education, having, as was common in those days, merely "read medicine" with a doctor already in practice. He was surprised when we told him that Long had attended Transylvania Medical School and had graduated in Medicine at the University of Pennsylvania. When we asked where Long lived, he said that Mrs. Fannie Long Taylor was living on Milledge Avenue, and that she could tell us where Dr. Long had lived and anything else we wanted to know. She had a trunkful of his papers which she was always glad to show to anyone who was interested. The professor then

branched off on another old Athens doctor, a contemporary of Long's who was convinced that flies carried dysentery, but was unable to convince anyone else of that truth.

The Memorial Building was found without difficulty, but it contained no portraits of any kind. In fact it was bare of everything except three pool tables and the coach's offices. One of the coach's secretaries phoned all over the campus trying to locate the portrait. Several persons told her that it was in the Memorial Building, the others knew nothing of its whereabouts. We checked off the portrait from our list, and began looking for the house. No. 165 Waddell Street had "Crawford W. Long" in big letters across its front, but it did not look like the picture in Dr. Young's article, so we decided to look up Mrs. Fannie Long Taylor. The city directory contained no such name. Three Taylors lived on Milledge Avenue. We took the numbers down. At the first address, a handsome old lady told us that Mrs. Fannie Long Taylor lived about six blocks down the street in a duplex house near Henderson Street. The duplexity of the house was not apparent, so we inquired at the house on the corner. There we were told that Mrs. Taylor had been dead several years but that some of her people lived in the house, pointing out the house. To the question as to where Dr. Long lived, the lady of the corner house replied that he lived on Chase Street near the Chase school. A filling station attendant had told us that he lived on Chase near Prince Avenue. At the duplex house no one answered the bell, and as milk bottles were still on the porch we concluded that no one was at home.

We checked off the house and began to look for Oconee Cemetery. The Cemetery was found to be in dreadful repair, merely an old field crossed by footpaths. There were a few broken stones whose inscriptions could scarcely be read, and a broken down iron railing. There was no one to give us directions or to show us a plot, so we called it a day with the belief that in Athens Crawford W. Long was a fast fading myth.

As we got out of our car in Danielsville to look at the beautiful marble statue, a replica of the one in Statuary Hall of the U. S. Capitol by John Massey Rhind, we met a lady who told us without hesitation that Dr. Long was born in the house on top on the hill beyond the church. We drove the half mile over a red clay road. The house is now owned by Mr. Harrison Sorrow who has been living in it for six or seven years. When asked if Crawford W. Long had been born in the house, he replied that some folks said so and that others said that he was born in a house that is now occupied by Mr. Greene's store. Dr. Long's father built the house and young Long lived in it when he was a child, but whether he was born there he could not say. At the store a clerk and several customers were of the opinion that Long was born where the store now stands. When asked what made them think so, they all replied that Mr. Greene was of that opinion and that as Mr. Greene was 83 years old, he ought to know. We looked for the shaft that Hugh Young said had been erected in Danielsville in 1926, but could not find it. Danielsville is such a little place that we are sure we could have found it, had it been there, so we checked off that item. At Augusta we had no difficulty in finding the handsome building of the old medical college where in 1848 Long told for the first time the story of his discovery of ether anesthesia. The building no longer belongs to the medical school, but to the Garden Club, and its present owner is taking good care of this landmark. Thus, after three days of trying to find and photograph everything connected with Crawford W. Long and his epoch making operation, we wound up with an uncertainty as to just where he was born in Danielsville and as to where he lived in Athens, and concluded that the natives did not know whether he

operated indoors or out of doors or whether or not he had graduated in medicine, and cared little about where he was buried.

Floral Eonym (48)

JOHN STUART, THIRD EARL OF BUTE, 1713-1792

STEWARTIA (ALSO SPELLED STUARTIA)

THE third earl of Bute was the power behind the throne during most of the reign of George III, even when he had no official connection with the government. The Dictionary of National Biography described him as a proud but intentioned nobleman, with handsome person and pompous manners. He possessed some talent for intrigue, but his abilities were meagre and his disposition irresolute. He was utterly unfit to direct the destinies of a great nation. He had no knowledge of public affairs, no experience of parliamentary debate, no skill either in the management of men or in the administration of affairs. Nevertheless, he succeeded in breaking up the whig oligarchy. His talent lay in other fields. He had a taste for literature and the fine arts, was passionately fond of botany, and possessed a superficial knowledge of various kinds of learning. He was a governor of the Charterhouse and chancellor of Marischal College, Aberdeen; a trustee of the British Museum; president of the Society of Antiquaries of Scotland; a commissioner of Chelsea Hospital; and an honorary fellow of the Royal College of Physicians at Edinburgh. When he became prime minister, he purchased an estate at Luton Hoo where Robert Adam built him a palatial residence. Here he formed a magnificent library, a superb collection of astronomical, philosophical and mathematical instruments and a gallery of Dutch and Flemish paintings, as well as a botanical garden. Lansdowne House was built for him by the Adam brothers, but he sold it to Shelburne before its completion, for 22,000 pounds. Sir Joshua Reynolds painted his portrait in 1763 and in 1773, and there are engravings of Bute by Watson, Graham and Ryland after Ramsey.

Bute died at his house in South Audley Street, Grosvenor Square, on 10 March 1792 and was buried at Rothesay in the island of Bute.

Stewartia are showy, white flowered shrubs or trees of the family Theaceae found in the southeastern United States or eastern Asia. The common name for S. malachodendron is silky camellia, and the S. pentagna is mountain camellia.

SOCIETIES

The Arlington County Medical Society

Held its first meeting for 1947 on January 16th under the direction of the newly elected President, Dr. C. P. Cake.

The scientific program was given by Dr. John L. Parks, Professor of Obstetrics at George Washington University School of Medicine, on the subject, "The Pathological Condition of Pregnancy".

LEO SOLET, *Secretary.*

The Augusta County Medical Association

Held its regular quarterly meeting at Hotel Stonewall Jackson in Staunton on the afternoon of February 5, with a good attendance of members and guests. Dr. G. Edmund Stone of Staunton presided and Dr. Boyd H. Payne, also of Staunton, was at the secretary's desk. Dr. Richard P. Bell, Jr., Staunton, reported a case of Dermoid Cyst of the Right Ovary, Gangrenous, on Twisted Pedicle, in a Child

of Four Years, after which the following papers were read:

Some Studies of Hypertension—Dr. H. Fitzhugh White, Staunton;

The Treatment of Nervousness, Including Psychosomatic Conditions—Dr. F. W Dershimer, Wilmington, Delaware;

The Value of Shock Therapy in Neuropsychiatric Disorders—Dr. R. Finley Gayle, Jr., Richmond.

Following the scientific session there was a short business meeting, at which Dr. John T. Obenschain of Waynesboro was elected to membership, after which the meeting adjourned for dinner at the Hotel.

Lynchburg Academy of Medicine.

At its regular meeting on February 3rd, Dr. Conrad G. Collins, chief gynecologist at Tulane University and consultant in the Ochsner Clinic, spoke on "Intravenous Clotting as a Problem in Obstetrics and Gynecology". There was an attendance of fifty-five, including doctors from Bedford, Amherst, South Boston, Roanoke and Richmond.

Dr. F. Read Hopkins is president of the Academy and Dr. Robert H. Cox, Jr., secretary.

The Medical Society of Northern Virginia

Held its regular meeting in Woodstock on December 10th, under the presidency of Dr. G. G. Crawford, Strasburg. The following program was presented: Malignant Tumor of Kidney by Dr. E. C. Stuart, Jr., Winchester; Potts Disease with Pregnancy by Dr. P. T. Grove, Winchester; Idiopathic Thrombocytopenic Purpura by Dr. Elizabeth B. Sherman, Front Royal; A Case Report by Dr. L. K. Woodward, Woodstock; Coronary Thrombosis by Dr. F. D. Whitworth, Front Royal; Hepatitis by Dr. W. W. Zimmerman, Purcellville; and The Importance of Frequent Examination of the Chest by Dr. Charles Bondurant, Front Royal. Dr. W. Warren Sager, Washington, D. C., was invited guest and his subject was The Diagnosis and Treatment of Intestinal Obstruction.

New officers elected at this meeting are: President, Dr. D. M. Kipps, Front Royal; vice-president, Dr. C. H. Iden, Berryville; and secretary-treasurer, Dr. Herman I. Pifer (re-elected), Winchester.

Roanoke Academy of Medicine.

The February meeting of the Academy was a dinner meeting at Hotel Roanoke on February the 3rd. Following the dinner, two guest speakers presented the scientific program: Dr. Harry Walker, Richmond, spoke on The Management of Tetanus, and Dr. Harry J. Warthen, also of Richmond on Conservative Surgery in Diabetes. Dr. Charles A. Young and Dr. Wade H. Saunders, both of Roanoke, are president and secretary, respectively.

The Williamsburg-James City County Medical Society

Held their quarterly meeting on February 14th. Dr. H. E. Davis was the retiring President, and Dr. J. R. Parker of Providence Forge was elected to serve for the coming year. Dr. F. A. Dick, Williamsburg, was elected Vice-President, and Dr. E. Beamer-Maxwell, also of Williamsburg, was re-elected Secretary-Treasurer. Drs. H. E. Troup and Allan Burke, both of Williamsburg, were elected to membership.

The Society hopes to increase its membership and the cooperating group by inviting guests from the near-by County Societies, and from other civic organizations. The next meeting will be held on May 9th.

The Wise County Medical Society

Was entertained by Dr. N. H. Short, of Norton Clinic, at Hotel Norton, February 14th, with an attendance of twenty-five. After a feast on turkey and all that goes with it, Dr. Lloyd G. Thompson, Richlands, spoke on Liver Diseases, centering his attention on Cirrhosis, and Dr. James P. Williams, Richlands, spoke on his actual experiences with Vagotomies for Gastric Ulcer. Both of these presentations were outstanding and were followed by fifteen-minute question periods.

Officers elected for 1947 are: President, Dr. N. H. Short, Norton; vice-presidents, Drs. J. A. Gilmer, Big Stone Gap, G. C. Snead, Derby, and H. H. Howze, Norton; and Dr. Frank Handy of Appalachia was elected to the Board of Censors. Dr. T. J. Tudor of Norton was re-elected secretary-treasurer. The President appointed the following committee chairmen: Program, Dr. C. B. Bowyer, Stonega; Financial, Dr. C. L. Harshbarger, Norton; and Social, Dr. C. R. Jones, Dorchester.

Virginia Peninsula Academy of Medicine Holds Special Meeting.

Dr. Harry Bakwin of New York City addressed the Virginia Peninsula Academy of Medicine at its regular monthly meeting, February 17, on "Why

Children Misbehave". Dr. Bakwin is Associate Professor of Pediatrics, New York University, Associate Pediatrician, Bellevue Hospital, and an outstanding authority on child psychology.

Preceding the address, ninety persons attended a dinner given by the Academy of Medicine at the Chamberlin Hotel, Old Point Comfort, in honor of Dr. Bakwin. The wives of the Academy members attended the dinner as guests.

Dr. Bakwin delivered his address at an open meeting in the Newport News High School Auditorium. This meeting was jointly sponsored by the Peninsula Academy of Medicine and the Parent-Teacher Associations Federation of the Lower Peninsula and was attended by a crowd estimated to number nearly 800. The speaker was introduced by Dr. Paul Hogg, of Newport News, on whose invitation he came to the Peninsula. Dr. Robert H. Wright, Jr., of Phoebus, president of the Virginia Peninsula Academy of Medicine, presided at the meeting.

CHESTER D. BRADLEY,
Secretary.

NEWS

The Southwestern Virginia Medical Society

Will meet on May 1st at Marion. The night program, which begins with a banquet, will be highlighted by the presence of Dr. J. S. Speed of the Campbell Clinic, Memphis, Tennessee, who will speak on "An Analysis of the Etiology of Low Back Disability: Treatment". Also appearing on this program will be Dr. W. R. Bond, Richmond, who will present some of the latest developments in the clinical use of Testosterone, and Dr. M. A. Johnson, Roanoke, who will speak on hip fractures. Among those on the afternoon program will be Dr. Joseph Barrett, Richmond, who will speak on "The Care of the Mentally Ill in Virginia: Past, Present and Future".

The officers of the Southwestern Society extend an invitation to all members of the Medical Society of Virginia to attend this meeting, especially orthopedic men throughout the State. Dr. C. F. Graham, Wytheville, is president.

A. F. GIESEN, *Secretary-Treasurer.*

New Health Services.

Effective February 1, 1947, Charles City County and New Kent County were added to the Peninsula Health District, with offices in Charles City and Providence Forge, respectively. Dr. T. F. McGough is Health Officer for this District, with headquarters in Hilton Village, Virginia.

Effective February 1, 1947, the Amelia-Goochland-Powhatan Health District was established, with headquarters at Powhatan, Virginia. Dr. Henry M. Snead is Health Officer of this District.

To Assist in Venereal Disease Work.

The State Department of Health announces the appointment of Dr. William J. Frohbose as clinical consultant and assistant in the Division of Venereal Diseases of which Dr. Edward M. Holmes is director. Dr. Frohbose is a member of the class of '43, Medical College of Virginia, and served two years in the Navy.

South Atlantic Association of Obstetricians and Gynecologists.

The annual meeting of the Association was held in Savannah the first part of February, with Dr. Robert A. Ross of Durham, N. C., presiding. At the close of the meeting, Dr. J. Randolph Perdue of Miami succeeded to the presidency. Dr. Tiffany J. Williams, Charlottesville, who has served as secretary-treasurer for several years, was named president-elect, and Dr. E. D. Colvin, Atlanta, Ga., succeeded him as secretary-treasurer. Dr. J. Ernest Ayre and Dr. Archibald D. Campbell, both of Montreal, were elected to honorary membership in the Association. The next meeting will be at Augusta, Ga., in February 1948.

Dr. Charles A. Young, Jr.,

Roanoke, is now serving a residency in ophthalmology at the Institute of Ophthalmology, Presbyterian Hospital, New York. He will be there for three years. Dr. Young graduated from the University of Virginia in 1942 and has just received his discharge from the U. S. Army.

Married.

Lt. (jg) Thomas Hancock Garth, MC., USNR., and Miss Anne Addison Waddell, both of Charlottesville, February 5th. He received his medical degree from the University of Virginia in 1946 and is at present stationed at the U. S. Naval Hospital in Portsmouth.

Dr. Rudd to Retire.

Dr. Wortley F. Rudd, dean of pharmacy of the Medical College of Virginia, will retire on July 1st, after having held this position since 1920. He will be succeeded by Dr. Robert Blackwell Smith, Jr., who has been assistant dean since December 1945.

Dr. Austin I. Dodson,

Richmond, was one of the guest speakers at the International Post-Graduate Medical Assembly of Southwest Texas held the latter part of January at San Antonio. His talk before the General Assembly was on The Management of Urolithiasis. Sectional meetings were held at lunch on January 29 and 31, at which time he discussed Treatment of Hydronephrosis and Treatment of Congenital Defects of the Male Genitalia.

American Congress on Obstetrics and Gynecology.

The program of the Third Congress to be held September 8-12, 1947, in St. Louis, will feature general sessions for all groups making up the Congress as well as smaller individual group meetings and round table discussions. The morning sessions will be panel-type presentations of Anesthesia and Analgesia, Cancer, and Caesarean Section. The afternoon meetings of the medical section of the Congress will consider Psychosomatic Aspects of Pregnancy, Pregnancy Complicating Cardiac Disease, Diabetes and Tuberculosis, and Recent Advances in Endocrinology. Round Table discussions will consider such topics as etiology of abortion, asphyxia, fibroids, prolonged labor, infertility, early ambulation, adolescence, treatment of abortion, genital relaxation, ovulation, the menopause, the cystic ovary, uterine bleeding, nutrition in pregnancy, geriatric gynecology, endometriosis and erythroblastosis.

The popular forceps and breech demonstrations that attracted so much attention at the Second Congress in 1942 will be increased in number so that eighteen demonstrations per day will be held.

A large Scientific and Educational Exhibit is being set up under the direction of Dr. J. P. Pratt of Detroit and a comprehensive Motion Picture Program is being arranged by Dr. John Parks of Washington, D. C. The committees assisting these doctors will review applications by prospective participants late this spring. Anyone wishing to make application for space in the Scientific Exhibit or for time on the Motion Picture Program may obtain the proper blanks from the office of the Congress at 24 West Ohio Street, Chicago 10, Illinois.

Duke University School of Medicine News.

Dr. Hans Löwenbach, Associate Professor of Neuropsychiatry, has just returned from a six months' assignment in occupied Germany. During this time Dr. Löwenbach visited, under the sponsorship of F.I.A.T. (Field Intelligence Agency Technical) most of the medical schools in the American, British, and French zones of occupation and in Berlin. Dr. Löwenbach's assignment was to gather such manuscripts on medical and related research that had remained unpublished due to the war and after-war conditions. More than 25,000 pages of original manuscripts in all fields of medicine were gathered and microfilmed. At the present time, this material is on its way to this country to be catalogued and abstracted. The material is available to the public through the Publications Board, Department of Commerce, 16th and K, Washington 25, D. C.

Dr. Hsiao-Chien Chang, Dean of Hsiang Ya (Yale-in-China) Medical College, Changsha, Hunan, China, and Dr. Pao-Chang Hou, Professor of Pathology at Cheeloo University, Tsinan, China, were recent visitors here. As guests of the Department of State, U. S. A., these doctors will continue to visit American medical institutions until June, 1947, at which time they will return to China to resume work in their respective universities. Dr. Chang addressed the undergraduate medical society on "Medical Education in China" and Dr. Hou's lectures to the Duke Faculty and student body on "Leprosy and Plague" and on "Kala-Azar" not only contributed to the general understanding of these diseases but also to an appreciation of medical problems in his native country.

The Technical Division of the Department of Radiology, under the supervision of J. B. Cahoon, Jr., R.T., has increased lectures and demonstrations in order to offer post-graduate instruction to outside technicians who need refresher courses. Two students are admitted for the accredited course in x-ray technical training each March and October. A nursing degree, college diploma, or former technical training is a pre-requisite.

Miss Helen Kaiser, Director of Physical Therapy, has recently returned from Greece where she was

active in the Near East Foundation. This organization, which has been engaged in Middle East relief since World War I, has established two demonstration rehabilitation centers with the cooperation of U.N.R.R.A. and the Greek government. These centers are for the care of the maimed of World War II as well as the civilian crippled and disabled. The Foundation has established a Physical Therapy School which has been set up by experienced American personnel, due to the lack of trained Greek personnel. Adequate supervision will be given to the students during their training and first years of work experience. The course has been set up to meet the requirements of the American Medical Association and upon completion of their present course of 12 months, two students will be selected for further study in physical therapy at Duke University.

Dr. Duncan & Dr. Hollins.

Dr. George A. Duncan announces the association of Dr. George G. Hollins, Jr., in the practice of orthopedic surgery. Their office is in Wainwright Building, Norfolk.

Dr. Joseph M. Barker

Has recently returned from the University Hospital, Ann Arbor, Michigan, where he spent one year as Clinical Fellow of the American College of Physicians under the direction of Dr. Frank N. Wilson in Electrocardiography. He is now located at 1801 K Street, Northwest, Washington, D. C.

Virginia Society of Ophthalmology and Otolaryngology.

The annual meeting of this Society will be held at The Cavalier, Virginia Beach, May 10th, under the presidency of Dr. Thomas E. Hughes, Richmond. Dr. Fred E. Hamlin, Roanoke, is president-elect, and Dr. Francis H. McGovern, Danville, secretary-treasurer. Dr. A. A. Burke, Norfolk, is chairman of arrangements for the meeting.

Dr. S. B. Mizroch

Announces the opening of his office in Wainwright Building, Norfolk with practice limited to the diagnosis and treatment of cancer and related diseases. He is a graduate in medicine from the University of Virginia, class of 1936, and has recently returned from Service in the U. S. Army.

Wanted—

A young doctor for a junior partner. Country practice; good salary plus commission. Address "Doctor", care this journal, 1200 East Clay Street, Richmond 19. (*Adv.*)

For Sale.

GE X-Ray, Model 1775, 30 ma, 85 KVP, table with Bucky, in excellent working condition. James P. King, M.D., Radford, Virginia. (*Adv.*)

For Sale—

Burdick Quartz Ultraviolet Lamp. In perfect condition. All the most desirable features. Write "Burdick Lamp", care this journal, 1200 East Clay Street, Richmond 19. (*Adv.*)

Doctor Wanted—

In town with thriving paper mill, employing over three hundred people, with five hundred people in town and good surrounding farming section. For details, write Mr. S. T. Putt, Big Island, Va. (*Adv.*)

Doctors Needed in Rural Areas.

Many inquiries come to this office for doctors in rural communities. If interested in such, send your name to this journal, 1200 East Clay Street, Richmond 19. (*Adv.*)

The School-Child's Breakfast.

Many a child is scolded for dullness when he should be treated for undernourishment. In hundreds of homes a "continental" breakfast of a roll and coffee is the rule. If, day after day, a child breaks the night's fast of twelve hours on this scant fare, small wonder that he is listless, nervous, or stupid at school. A happy solution to the problem is Pablum. Pablum furnishes protective factors especially needed by the school-child—especially calcium, iron and the vitamin B complex. The ease with which Pablum (or Pabena) can be prepared enlists the mother's cooperation in serving a nutritious breakfast. This palatable cereal requires no further cooking and can be prepared simply by adding milk or water of any desired temperature.

OBITUARIES

Dr. James Alexander Grizzard,

Drewryville, widely known Southampton County physician and businessman, died January the 28th. He was sixty-five years of age and a graduate in medicine from the Baltimore Medical College in 1906, joining the Medical Society of Virginia the same year. He was a member of various medical

societies and a former president of the Southside Virginia Medical Association, a member of the local Ruritan Club, and a thirty-second degree Mason. He is survived by his wife and three children.

Dr. William Seddon Cox,

Of West Point, widely known physician of Tidewater Virginia, died in a Richmond hospital on February the 11th, after a long illness. He was sixty-one years of age and a graduate from the former University College of Medicine, Richmond, in the class of 1913. He practiced for a number of years in King and Queen County before moving to West Point about twelve years ago. He was a former member of the Town Council of West Point and was active in the civic and religious life of the community. He was a member of his State and local medical societies. His wife and three children survive him.

Dr. Robert Lawrence Mason,

Roanoke, died January the 15th, aged sixty-one years. He graduated from the Medical College of Virginia in 1915 and had been a member of the Medical Society of Virginia for sometime. His wife and three daughters survive him.

At a meeting of the Executive Committee of the Roanoke Academy of Medicine on January 21, 1947, the following resolutions were adopted:

The Roanoke Academy of Medicine wishes to express to the family of Dr. R. L. Mason their sincere sorrow in his death. Since locating here he has been a member of the Roanoke Academy of Medicine and recognized by that body as a man of highest ideals both in his professional and civic life. He loved clean sports of every kind and was interested in many of their activities. The Boy Scouts of Roanoke knew him well and will miss him.

BE IT RESOLVED that a copy of this expression of regret be entered upon the minutes of the Roanoke Academy of Medicine and that copies be sent to the family and to the Medical Society of Virginia.

L. G. RICHARDS
T. ALLEN KIRK
K. D. GRAVES, *Chairman*

Dr. Reginald Munson,

For many years a practicing physician at Linden, died December 29. He was eighty-nine years of age and graduated in medicine from George Washington University, Washington, in 1883. He was a member of the Medical Society of Virginia.

Resolutions on Doctor Carper.

WHEREAS, Dr. O. W. Carper was an active member of the Northern Virginia Medical Society for fourteen years and a past president; and,

WHEREAS, his service to the Society, to his profession and to his community was both valuable and outstanding; and,

WHEREAS, we, his professional colleagues and friends, feel that it is fitting that the records of the Society should contain some evidence of recognition of, and appreciation for, his loyal and able service to the Society.

NOW THEREFORE, BE IT RESOLVED: *First:* That the Northern Virginia Medical Society has lost one of its most genial and valuable members and the medical profession of the State one of its outstanding men.

Second: That the Society, as a whole, and its members, as individuals are deeply sensible of the loss that has been sustained by the untimely death of Dr. Carper while he was at the height of his career, death having come from a cause, before which our profession at the present time stands helpless.

Third: That the Society, as an official organization, and its members as individuals, recall with pleasure the association with him, and they express their gratitude for his contribution to their profession and will remember him for his charming personality and delightful sense of humor, and that their regret at his departure is indeed great.

Fourth: That the Society express to Mrs. Carper and her daughter their sincere sympathy in this time of sorrow.

Fifth: That these resolutions be spread on the minutes of the Society and the Secretary directed to send a copy thereof to Mrs. Carper.

D. M. KIPPS
ELIZABETH B. SHERMAN
L. J. HANSBROUGH
Committee.

Resolutions on Dr. J. W. Preston.

At a meeting of the executive council of the Southwestern Virginia Medical Society held January 16, 1947, at Wytheville, Virginia, the following resolution was adopted:

BE IT RESOLVED that in the death of Dr. J. W. Preston this Society has lost a most skillful and competent doctor and a real friend who administered to the public at all hours and gave his time to the great cause and to the betterment of the medical profession in the State and in America.

IT IS FURTHER RESOLVED that a copy of this be sent to the VIRGINIA MEDICAL MONTHLY and to his family as well as spread on the minutes of this Society.

R. M. DEHART, *Chairman*
C. F. GRAHAM, *President*
A. P. JONES
BEVERLEY ECKLES
W. A. PORTER
T. L. GEMMILL

GOLD THERAPY in Rheumatoid Arthritis



THE consensus of clinicians who have had considerable experience with aurotherapy is that gold, despite its recognized toxicity, is the most effective agent available for the treatment of active rheumatoid arthritis.

The following statements, quoted from the article entitled, "The Use And Abuse Of Gold Therapy In Rheumatoid Arthritis," by Bernard I. Comroe, M. D. (*J.A.M.A.* **128**:848-851, July 21, 1945), constitute an excellent summary of the present position of gold therapy in arthritis:

1 Gold is of no value in any form of joint disease except rheumatoid arthritis.

2 Gold does not benefit all patients with rheumatoid arthritis.

3 Gold is not the final answer to the treatment of rheumatoid arthritis.

4 Toxic symptoms may appear at any time during this form of therapy.

5 From 10 to 20 per cent or more of patients who have received gold therapy relapse after stopping the drug.

6 Extreme care must be used during gold therapy, and the physician must be familiar with the details of such treatment before undertaking this.

7 Injections of certain gold salts in proper dosage may be followed by subjective and objective evidence of improvement in the majority of selected patients with rheumatoid arthritis.

Literature on request

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GOLD SODIUM THIOMALATE MERCK

for the treatment of rheumatoid arthritis

MERCK & CO., Inc. RAHWAY, N. J.

Manufacturing Chemists

MERCK MERCK



The rooster's legs are straight.

The boy's are not.

The rooster got plenty of vitamin D.

Fortunately, extreme cases of rickets such as the one above illustrated are comparatively rare nowadays, due to the widespread prophylactic use of vitamin D recommended by the medical profession.

One of the surest and easiest means of routinely administering vitamin D (and vitamin A) to children is MEAD'S OLEUM PERCOMORPHUM WITH OTHER FISH-LIVER OILS AND VIOSTEROL. Supplied in 10-cc. and 50-cc. bottles. Also supplied in bottles of 50 and 250 capsules. Council Accepted. All Mead Products are Council Accepted. Mead Johnson & Company, Evansville 21, Ind., U.S.A.

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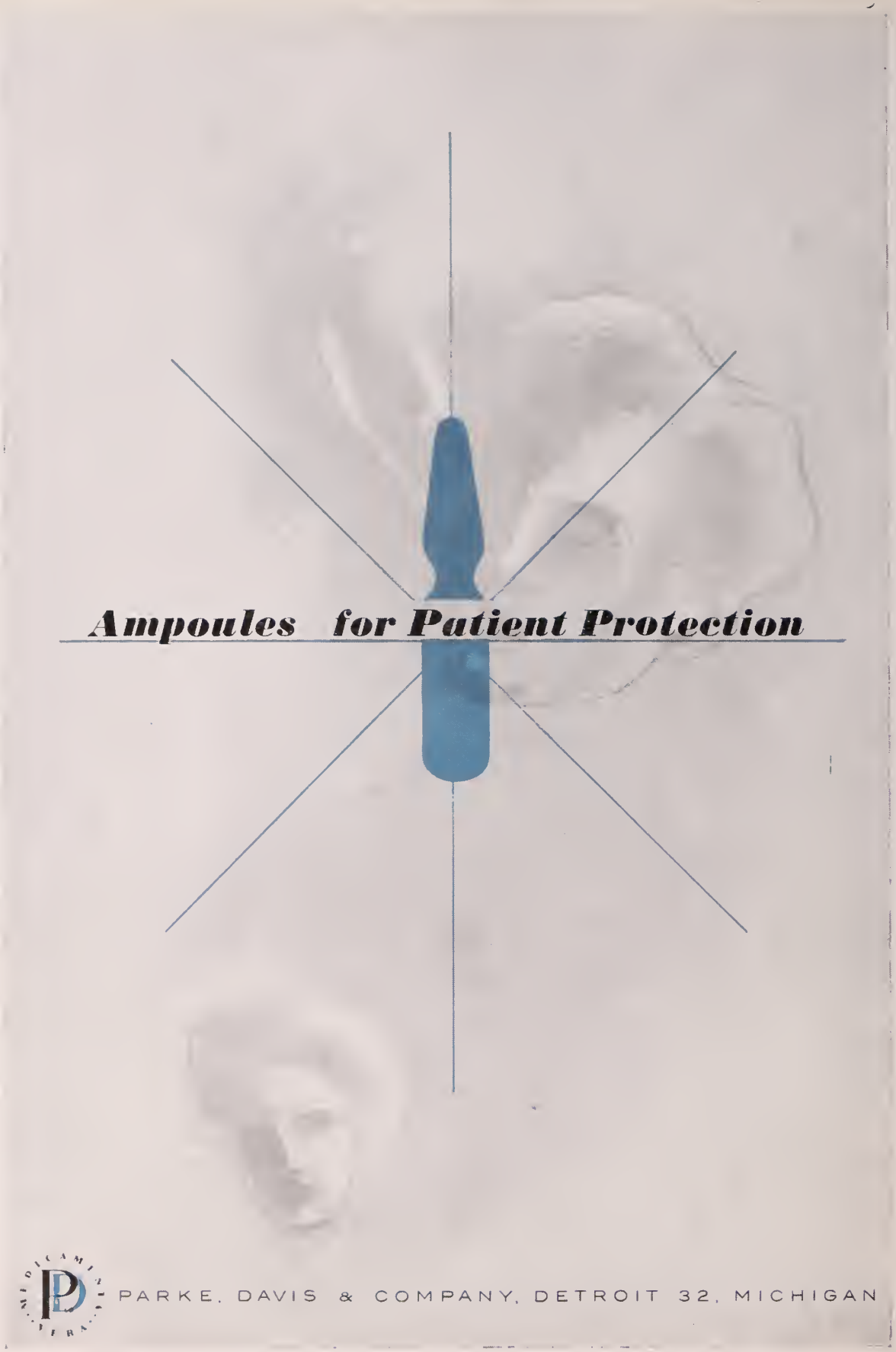
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April 1947


Ampoules for Patient Protection
PARKE, DAVIS & COMPANY, DETROIT 32, MICHIGAN

Virginia Medical Monthly

Vol. 74, No. 4.
WHOLE No. 1138.

RICHMOND, VA., APRIL, 1947

$2.00 A YEAR
25 CENTS A COPY

MEDICAL SERVICE SECOND TO NONE*

E. C. HARPER, M.D.,
Assistant Director of Tuberculosis Section, Veterans Administration
Richmond, Virginia.

Being a member of this Society, it is a pleasure for me to have an opportunity to be invited to talk to this medical group and its friends. Being a member of the Medical Staff of the Veterans Administration, it is naturally an added pleasure for me to be invited to talk to a group that is interested and concerned with the medical welfare and care of the war veterans of America . . . a group that is not only interested in the medical care the veteran is receiving at present, but is also interested in the plans that are being evolved to care for him or her in the years to come.

We all remember that day in December, 1941, when the late President Roosevelt requested the Congress to declare a state of war between our government and the governments of Imperial Japan and the Third Reich. Those grim days will always be fresh in our memories. Probably your thoughts then were the same as mine. We wondered what kind of army and navy we had. We wondered how well equipped our country was to wage a total war on two widely separated fronts.

Up until that point the average layman's mind had not been too concerned with military things, and I am afraid that many of us regarded the army and navy as necessary evils, until it became time for us to think in immediate terms of our own self-protection. However, we soon found that when the chips were down, when the need arose, the men and women who were leading and serving in our Armed Forces were equal to the formidable task ahead.

Eventually the war in Europe was brought to a victorious conclusion. A few months later, V-J Day was declared; and less than 15 hours after that President Truman appointed General Omar N. Bradley as Administrator of Veterans Affairs and as head of the Veterans Administration.

Even before that, however, wounded, sick, weary veterans were pouring back into the States from the war fronts, headed for Army and Navy hospitals. And the officials of the Veterans Administration then began to realize the enormity of the job with which they were faced.

Veterans Hospitals, too, started to receive their share of this great flood of men and women who needed the absolute best in medical care.

Each day the load became heavier. Each day the number of patients at hospitals everywhere increased. And each day the problems of caring for these men and women were multiplied.

During the war years, Veterans Administration Hospitals faced the same problem that beset all other hospitals during that period. They were short of personnel of all types. Many of the doctors and nurses had gone off to war, leaving behind a skeleton staff.

Just one year ago there were over 1,700 army and navy doctors serving on special detail in Veterans Administration hospitals. This, of course, is a temporary measure adopted to help relieve the critical personnel shortage. In August, of 1945, General Bradley appointed General Paul R. Hawley, former Chief Surgeon in the European Theatre of Operations, as his Director of Medicine and Surgery. Hawley immediately announced that the goal for veterans in Veterans Administration hospitals was "MEDICAL CARE SECOND TO NONE". And with each succeeding day we try to reach nearer that goal.

During the last year the two most difficult problems faced by the Medical Service of the Veterans Administration were the twin-spectres of *personnel* and *space*. The former is well on its way towards being solved. Many highly-capable, well-qualified doctors, dentists, and nurses have answered the call of the deserving veteran and joined the ranks of the Veterans Administration. The latter problem is one

*Read by invitation at the annual meeting of the Medical Society of Virginia at Virginia Beach, October 14-16, 1946.

that will continue to plague us for some time, although heartening progress has been made in solving this problem.

The hospital construction program of the Veterans Administration continues apace. Through the acquisition of Army and Navy hospitals, contracts with private institutions, and the Veterans Administration construction program, hundreds of hospital beds have been added to our quota.

As I said, this problem will be with us for the next year or so, but it is one that we are confident can be solved.

Somewhat less than a year ago a special act of Congress created the Department of Medicine and surgery as an integral part of the Veterans Administration. This act takes professional personnel away from the control of Civil Service regulations except for certain provisions such as vacations and retirement, and places them entirely under the supervision of Dr. Hawley.

One of the biggest changes brought about by the creation of this new department is the fact that doctors who join the Veterans Administration can now be classified and paid according to their professional ability and standing.

Heretofore under Civil Service regulations, the Veterans Administration was required to place a man in a particular position and then pay him a salary that had been established for that position. In effect, we can now award a man a salary more in proportion to his actual ability, rather than be forced to wait for vacancies to occur along the line so that able men can be more adequately compensated.

All of these things we feel are bringing us closer to our objective of providing medical care second to none for the veterans of America. And yet these things are in themselves only a beginning, and I am sure it is not necessary to try to impress upon you the necessity of continuing this work with sustained energy and efforts.

The Veterans Administration furnishes medical care for veterans with service-connected disabilities and with non-service connected illnesses.

Men and women who served in the Armed Forces and who are discharged with a service-connected disability can be furnished hospitalization or out-patient care regardless of their financial status. However, veterans with non-service-connected illnesses who cannot pay for treatment may be given hospitalization in VA hospitals, provided there is a vacancy that is not required by a veteran with a service-connected disability.

To return for a moment for a few words about Veterans Administration Hospital Construction Program, I would like to point out that because the Veterans Administration has over 20,000,000 potential patients, we have embarked upon the world's largest hospital construction program, which, according to present planning, will result in the Veterans Administration operating around 200 hospitals. In Virginia alone at the present time there are well over 2,500 veterans in the three Veterans Administration hospitals in the State . . . Roanoke, Kecoughtan and McGuire. In these three institutions there are some 255 doctors and 30 dentists, many of whom are present this evening.

To cite an example of the patient load the Veterans Administration hospitals are currently bearing, and which incidentally we expect to increase, I would like to offer a few figures of the patient population at McGuire VA Hospital in Richmond. Dr. Edmund M. Ellerson, Manager of the institution, has said, and I quote: "McGuire Hospital, besides being a hospital of general medicine and surgery, has 200 tuberculous cases, about 100 acute neuropsychiatrics and approximately 140 paraplegics. Of the 1,000 available beds at McGuire, 755 are occupied . . . 60 are on trial visit, 96 are committed, which leaves us a reserve of about 90 beds." Dr. Ellerson went on to say that we must have more space shortly. He said that 2,800 patients had been admitted since VA took over McGuire from the Army last April. Eighteen days is the average stay of a patient at McGuire as compared to the Branch Area average of 29 days.

McGuire in Richmond is primarily a general medical hospital; however, it has some of the most modern and up-to-date equipment for the treatment of paraplegic patients of any hospital in the country.

Roanoke VA hospital is primarily an NP hospital; however, a number of beds there are allotted to tuberculous patients, many of whom are also neuro-psychiatrics.

The VA Home at Kecoughtan is primarily for general medical services, but, once again, a number of beds have been allotted to tuberculous patients.

While we do need more doctors, more consultants and more nurses in our hospitals throughout the Branch Area which includes the states of Maryland, North Carolina, Virginia, West Virginia and the

District of Columbia, each hospital is staffed with the necessary specialists in the various fields.

I am sure you are all familiar with the Residency Training Program that has been inaugurated under the direction of Dr. Hawley in many Veterans Administration hospitals. However, to touch briefly upon it, one of the most important points in this program is the magnificent cooperation that we have received through the work of the various Deans' Committees. These committees are composed of professional men in local medical schools who assist us in selecting young doctors to train as residents; and in providing the consultants to work with the staffs of our hospitals.

As has been said many times by both Dr. Hawley and General Bradley, Veterans Administration hospitals and the VA Medical Program in general could not hope to succeed without the cooperation of the medical profession of America. And, ladies and gentlemen, that cooperation has been evident in all of our work.

Recently Dr. Hawley announced that home town medical care for veterans with service-connected disabilities would soon be available in twenty states. This program is already in operation in 13 states and we hope that soon many more will be participating in the program. As this is one of the most important steps achieved in the Veterans Administration Medical Staff, I would like to explain it in some detail.

Home town medical care will be available to veterans with service-connected disabilities only when Veterans Administration establishments, such as out-patient clinics cannot promptly treat veterans or when traveling to them would involve undue hardship on the veteran. For example, a veteran living at Lee Hall, Virginia, may need medical treatment for injury that he received while on active duty in the Army. We can assume that the man does not need hospitalization and that it will be almost impossible for him to travel back and forth to Kecoughtan or to Richmond to receive out-patient care. The proper procedure for the veteran to follow in order to receive home town medical care from his own physician is for him to first visit the nearest VA office for authorization of the number and type of treatments deemed necessary. Then the local physician can be authorized to give those treatments at government expense.

Should this physician find when treating the man that more treatments are necessary than the VA first allotted, or that a different type of treatment is required, he may secure authorization for these by reporting his findings to the VA office.

One important thing that every home town physician must realize is that the veteran seeking treatment must first get his authority from the VA before he asks the doctor for treatment at Government expense. In the event that a veteran comes to you for such treatment, it will be advisable for you to first ascertain whether or not he has received this authority. It is in all cases the veteran's responsibility.

In emergencies the Veterans Administration expects you to treat the veteran as you would any other emergency case. However, either you or the veteran should notify the Veterans Administration officials promptly after the initial treatment if government payment is to be forthcoming.

One important point regarding home town medical treatment for veterans is that prompt swift service can be obtained from the Veterans Administration if the VA is furnished complete information about the veteran-patient seeking hospitalization, or out-patient treatment, as quickly as possible. We realize too well that in emergencies, the family physician may inherit the task of establishing the patient's eligibility for care by, or at the expense of, the VA.

Much time can be saved by the local physician, however, if he can first obtain the basic facts concerning the origin of the veteran's disability and the type of discharge from service that he received, before a request is made for authorization for treatment or hospitalization. If this is impractical because of an emergency situation, as we discussed before, the physician should get in touch with the proper VA office either by telephone or telegraph as soon as possible. Again I say, the delay in notifying the proper officials may make reimbursement by the Government impossible.

When this plan for home town medical care becomes effective in Virginia, the Veterans Administration Regional Office will be authorized to accept collect calls and telegrams from physicians regarding emergency cases. If the status of the veteran's disability is questionable, the VA will authorize pay for emergency care pending final decision of the veteran's claim. It has been determined that no veteran will be eligible for out-patient treatment or hospitalization in other than a Veterans Adminis-

tration hospital, unless the disability for which such care is desired is service-connected or service-aggravated to a degree deemed pensionable by the Veterans Administration. However, such care for non-service disability will be provided if that disability adversely affects a service-connected condition.

Regarding admission requirements to VA hospitals, I would like to point out that veterans of both war and peace-time service may be hospitalized in VA facilities. A veteran of war service is entitled to hospitalization for non-service-connected disabilities, if his discharge from the service is other than dishonorable, if a hospital bed is available and not required for a veteran with a service-connected disability, and, finally, if the veteran shows that he is unable to pay the costs of transportation and hospitalization in a civilian hospital.

A peace-time veteran may be hospitalized for a non-service-connected disability provided he has received an honorable discharge from his last period of service, or if he received a discharge for a disability incurred in line of duty, or if he is receiving a pension for service-connected disability and does not have any other adequate means of support.

Regarding women veterans, they are subject to exactly the same regulations as male veterans except that admissions to non-VA hospitals may be authorized for non-service-connected disabilities. Obstetrical cases are not considered disabilities for which treatment or hospitalization can be provided by the VA.

At present the Veterans Administration throughout the entire country is operating a total of over 100 hospitals of all types. One of the things that we are striving to do is to establish a teaching program for our medical staff in the majority of these hospitals. So far we feel that our record has been, at least, satisfactory. Within six months after the Department of Medicine and Surgery was established, there were 32 Veterans Administration hospitals conducting this teaching program. During the second six-months period Dr. Hawley has said that our objective is to have between 65 and 70 Veterans Administration hospitals operating this program.

There are, however, many difficulties that must be overcome. One supremely important one is the fact that some of our hospitals are built in such isolated places that it is difficult to get good doctors and good nurses to serve them. As we all know, there is a shortage of doctors and nurses in this country, or at least there is no excess. Very few of them need work so badly that they will accept just any position, and very, very few good doctors will accept isolation in a medical desert. About the only thing we can offer professional personnel at such an institution is a teaching program, and we are working hard to get this started. But a teaching program cannot be inaugurated at such a hospital without a superior teaching staff, and it is most difficult to attract a superior teaching staff to an isolated hospital. One measure that is helping us to work out this situation is by obtaining the part-time assistance of well trained doctors. But to get the assistance of well trained doctors, *we must go to them.* There will never be enough coming to us to give the veteran the high standard of medical care that he deserves.

One encouraging indication that progress is being made has come about in connection with our hospital construction planning. The sites of many of these new hospitals are purposely chosen so as to be close to medical centers and medical schools. Six months ago we frequently "had to sell" the medical schools on the advantages of cooperating with the Veterans Administration program. Latterly, however, we are in a fortunate position, in that grade-A medical schools throughout the country are urgently requesting us to put our new hospitals in their vicinity. It is our aim to keep this happy union in just that sort of mutually agreeable, profitable state.

I do not want to dry out my remarks with a hodgepodge of statistics; however, I think you might be interested in the percentages represented by our patient load at present. Of the patients in all VA hospitals, 51 per cent are neuro-psychiatric cases; 42 per cent are general medical and surgical cases; and 7 per cent are tuberculous.

Of the total patients in all of our hospitals, 39 per cent are World War II veterans and 61 per cent are veterans of other wars, the vast majority being veterans of World War I.

Of all the patients now in hospitals, 35 per cent have service-connected disabilities and 65 per cent have disabilities that are not service-connected. This proportion of service-connection varies widely with the type of disability. For example, 48 per cent of the cases of tuberculosis are service-connected as against 52 per cent non-service-connected. This is due to the very high percentage of service-connected

cases of tuberculosis among the veterans of World War II . . . 77 per cent of their tuberculosis being service-connected, whereas only 18 per cent of the cases of tuberculosis among veterans of other wars are service-connected. This, we feel, is what might be expected when the age distribution of tuberculosis is considered. Of the NP cases, 41 per cent are service-connected and 59 per cent non-service-connected. Here, again, the proportion differs considerably between World War I and World War II veterans. Sixty per cent of neuro-psychiatric cases from World War II are service-connected and 33 per cent from World War I.

I mentioned earlier that the Veterans Administration faced a potential load of 20,000,000 veterans. It is a conservative estimate that there will be sixteen or seventeen million veterans of World War II at the time World War II is officially ended. There are at present just under four million veterans of previous wars. World War II is not yet ended. There are still many thousands in the armed forces that we can expect will be demobilized within the next year. Every person now enlisting in the Army, even though hostilities have ended, is a potential veteran and will receive many of the benefits granted to veterans who served during hostilities. This all means that at the conclusion of World War II throughout the entire country we shall need 150,000 hospital beds to care for all veterans applying for hospitalization. The Veterans Administration present building program contemplates 125,000 beds, which it is estimated will still leave an excess of 25,000 patients who must be cared for in other federal, state or private hospitals.

The increasing need for hospital care as age advances is shown by the fact that at present more than 50,000 hospital beds are occupied from the population of less than 4,000,000 veterans of World War I, compared to the 30,000 hospital beds which are now occupied by the now 10,000,000 veterans of World War II. So, to project the problem 20 or 25 years into the future, if the veterans of World War II require as much as their predecessors, we shall need more than 250,000 hospital beds 20 or 25 years hence.

These few figures, however, are simply an indication of the work that must be accomplished by the Veterans Administration in the years to come. That work will not be accomplished, could not be accomplished, without the full cooperation of the civilian medical profession.

Ladies and gentlemen, I know the Veterans Administration will do its full part. We have only one principle and that one principle we will never violate. All of our time, all of our thought, and all of our energies are predicated on the fact that the veteran must be given the highest type of medical and hospital care available, anywhere in the world.

All arrangements to this end are flexible and they will be adjusted to meet local situations and conditions insofar as the law permits.

I trust that we may all work together to reach this one objective.

Floral Eponym (49)

ESCHSCHOLTZEA

JOHANN FRIDER. ESCHSCHOLTZ, 1793-1831

ESCHSCHOLTZ was born in Dorpat, November 1, 1793 (old style). He graduated in medicine in 1815, his dissertation being "De hydropsum differentiis". He went as ship surgeon with Kotzebue on the brig "Rurik". Upon his return he became prosector and "ausserordentlicher" professor in Dorpat and director of the zoological cabinet. His second voyage with Kotzebue on the ship "Predprijatel" carried him around the world. After 1828 he was "ordentlicher" professor of Anatomy. Kotzebue named a small coral island and a bay on the American side of the Behring Strait for him. A. Chamisso named a new species of plants *Eschscholtzia californica.*

Eschscholtzia is a genus of papaveraceous plants, found throughout the western coast of the United States. They have finely divided leaves and showy yellow or orange colored flowers. They are cultivated as garden annuals under the name of California poppies.

THE SELECTION OF AN OBSTETRIC FORCEPS TO SUIT THE CASE*

EDWARD H. DENNEN, M.D., F.A.C.S.,
New York, New York.

Given a proper case for delivery with forceps, an operator may select the kind of instrument most suitable for the conditions. Delivery may be accomplished with only one, or at most two varieties of forceps. However, other things being equal, a greater degree of success should be obtained with a knowledge of the advantages, and a discrimination in the use of the various kinds of forceps. There are several kinds of forceps, old and new, that have peculiar advantages under certain conditions.

In delivery with forceps under proper conditions, there are two features of prime importance; the application of the forceps to the child's head, and the traction used in accomplishing the delivery. These two acts determine the manipulation, effort, and, consequently, the associated trauma.

APPLICATION OF FORCEPS

The application must be cephalic and accurate. In a true cephalic or bi-parietal application, the blades should fit the head as accurately as possible. They should lie evenly against the sides of the head, reaching from the parietal bosses to and beyond the malar eminences, covering symmetrically the spaces between the orbits and the ears. There should be no extra pressure at any one point.

A correct application is essential. It prevents injury to the head because the blades fit the head accurately and pressure is evenly distributed; the pressure is on the least vulnerable areas; the increased diameter of the head, due to the thickness of the blades, is at the narrowest place, thereby minimizing the force necessary for delivery.

A correct application lessens injury to the mother because the head advances in the proper attitude. It is vital to the technic of the delivery because it enables the operator to know the exact position of the head, and allows him to use the most favorable diameters. These conditions are not fulfilled by the undesirable brow-mastoid application.

In selecting an instrument with which a good application can be obtained, the choice depends upon a correct diagnosis of the amount of moulding, position and station of the head, and the type of pelvis.

On moulded heads, the best application is obtained with blades which have a long, tapering, cephalic curve. Those with a short, full curve do not fit evenly, causing pressure points, and often are not anchored below the malar eminences, with consequent cutting or slipping.

In considering the position of the head, the instrument to be chosen is the one which gives the correct application with the least effort. When the occiput is anterior, the application is, as a rule, easily made, and any blade which fulfills the requirements of the moulding may be used. For other positions and presentations there are special types which will be considered with the various forceps operations. A high head, in a flat pelvis, may be angulated in such a position that a cephalic application cannot be obtained unless the forceps have a flexible blade.

TRACTION

The traction also plays a very important part in the choice. To use the least force, one should make traction in the pelvic axis. This may be done manually, but is best accomplished in all stations of the head with some form of axis-traction forceps. Even in low forceps, axis traction is valuable in obtaining flexion, and in eliminating the force wasted against the symphysis. The deep episiotomy allows the handles of the forceps to lie in a lower plane. This, with the use of the fingers as a fulcrum, may eliminate the necessity of instrumental axis traction on low heads. However, the axis-traction instrument automatically directs the force away from the symphysis, and thus simulates the physiological mechanism of labor.

Axis traction suggests, to many, a difficult operation with a complicated instrument. For this reason, in the average case it is often neglected, though the advantages are admitted. The classical forceps, without axis traction, are frequently used with the maximum force, reduced manually by the modified

*Read before Southwestern Virginia Medical Society at Radford, October 3, 1946.

Pajot maneuver. Axis-traction forceps, however, tend to keep the force in the plane of least resistance, thereby diminishing the amount of effort and injury.

SELECTION OF INSTRUMENT

In the selection of an instrument which fulfills the requirements of application and traction, there are a number of excellent forceps from which to choose. Some are simple, others complicated. All have one or more good points, which justify their use when properly chosen. Some are so similar that there is very little choice between them. Most modern forceps of the classical type follow, in a general way, one of two constructions: the shanks overlap, the blades have a short, cephalic curve as in

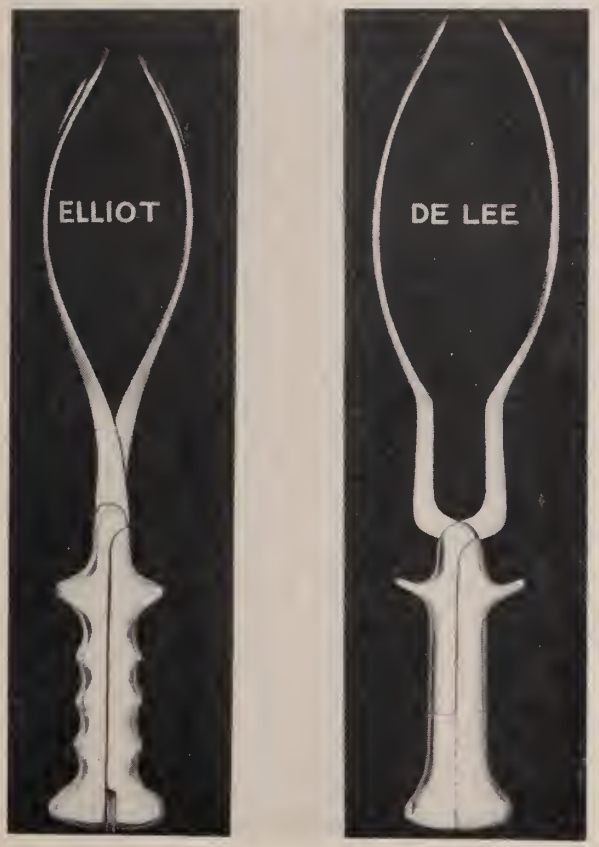


Fig. 1.—Shows difference in construction in the two common types of forceps.

the Elliot, or the shanks are separated, and the blades have a long, tapering curve as in the Simpson. (Fig. 1) But not all of them have axis traction. This disadvantage can be overcome in some of the Elliot type by the use of the Bill axis-traction handle.

Various localities have their favorites. In Boston and that vicinity, the light Good forceps with the traction rods from the fenestrations, concealed in the handles, are popular. So are Irving's with traction rods similar to Tarnier's, which permit the use of the most accurate line of traction of any axis-traction attachment. In Philadelphia, there is a preference for the DeWees', and Piper's modification of it, with the traction rod attached to the end of one handle. Chicago favors the DeLee modification of the Simpson without axis traction and the Adair with multiple perforations of the solid blades. In New York, several types are used: DeWees', DeLee's, Tucker-McLane's, Bailey-Williamson's, Lobenstein-Tarnier's, Elliot's and Hawks-Dennen's. (Figs. 2, 3, 4) In different parts of the country, the Kielland's and Barton's are gradually increasing in popularity for use on cases with the head not in an anterior position. The interest in both these instruments should continue to grow with the better understanding of their advantages and a thorough knowledge of the technique of their use.

LOW FORCEPS

In a truly low forceps, most heads are in the anterior position. The amount of moulding, and the type of outlet determine the choice of instrument. In pelves with a low pubic arch, and a short anterior posterior diameter of the outlet, it is essential to choose a blade with a good pelvic curve. This will put less pressure on the perineum, and tend to avoid sulcus tears of the vagina during extension. In normal pelves, the important factor is protection of the child's head against cuts and abrasions. Third degree tears are guarded against by frequent use of perineotomy. It is thought that a cut perineum, well repaired, is better than one which is torn or stretched. It also relieves the pressure on the anterior wall.

The mother is, as a rule, a primipara, or perhaps a multipara in long labor. This usually means moulding of the baby's head, with its sides lengthened and flattened. A Simpson type of forceps fits best. It has a long, shallow, cephalic curve, and the tips can be anchored well below the malar eminences, preventing pressure points and slipping. A blade with a short, sharp, cephalic curve, of the Elliot type is suitable for round heads. When considerable moulding is present, it fits unevenly, and

occasionally gives difficulty in proper locking.

For easy extractions, the solid blades of the Tucker-McLane are popular with some obstetricians. They are easy to apply and remove, and may be used on small round heads. On moulded heads, they may slip, due to lack of anchorage below the malars, and they exert pressure on two points; the zygoma, and parietal boss. The result may be a cut over the zygoma just in front of the ear, and the appearance later of swelling over the boss. The latter is a periostitis which may last for weeks, and occasionally develops into an abscess. Luikart's modification, in which the outline of the fenestration is preserved on the inner surface of the solid blade, minimizes this disadvantage.

Many times, what is thought to be an easy low forceps, later proves to be the caput of a moulded head, the bi-parietal diameter of which is at, or above, the ischial spines. Then the operator wishes he had chosen a fenestrated blade originally. The solid blades are excellent as rotators in the first stage of the Scanzoni maneuver. A suitable fenestrated type may be used for the extraction.

To simplify the choice of instrument for anterior positions of the occiput at any station in the pelvis, an uncomplicated, light, fixed axis-traction forceps

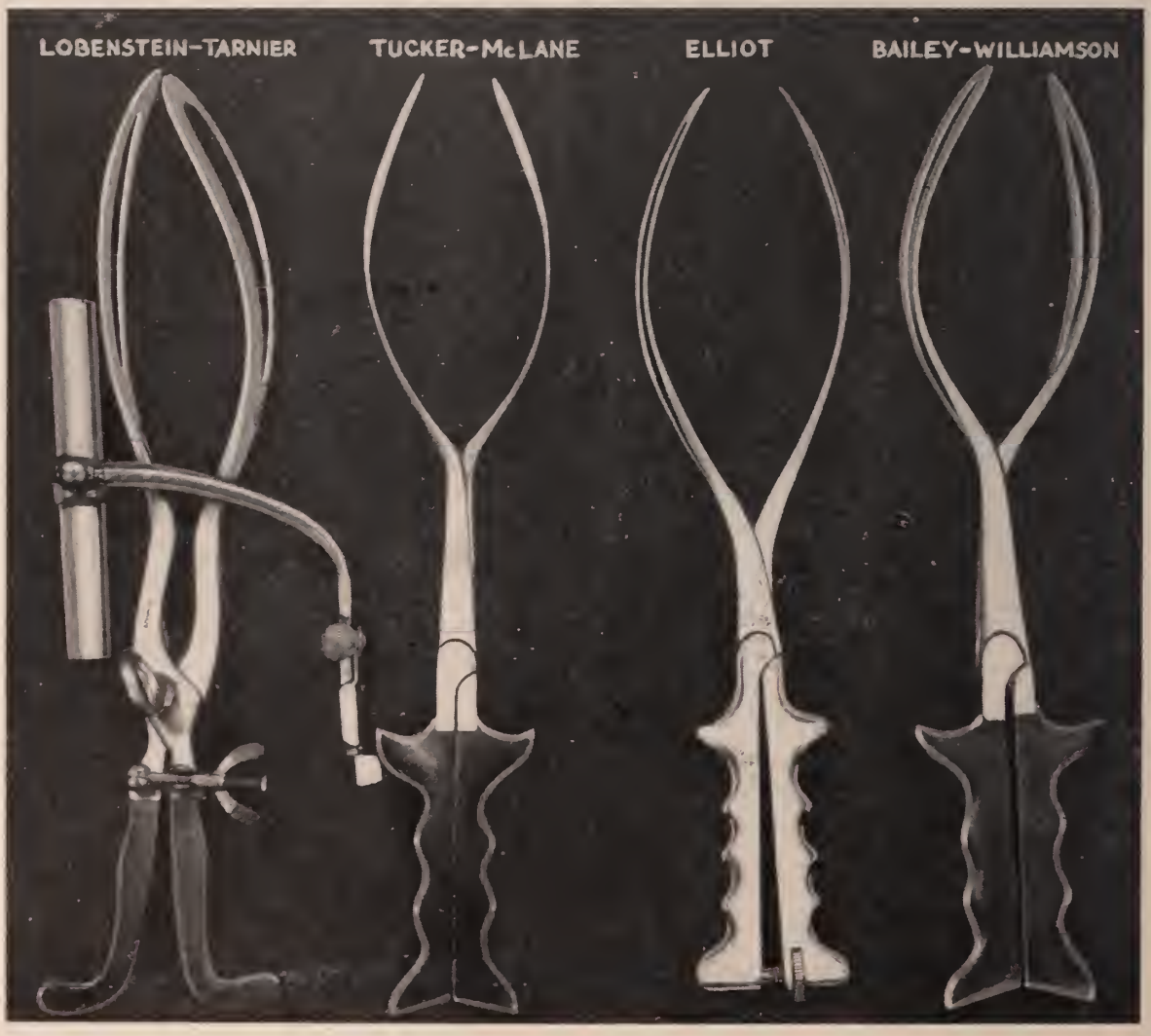


Fig. 2.—Shows Elliot Types (except Tarnier).

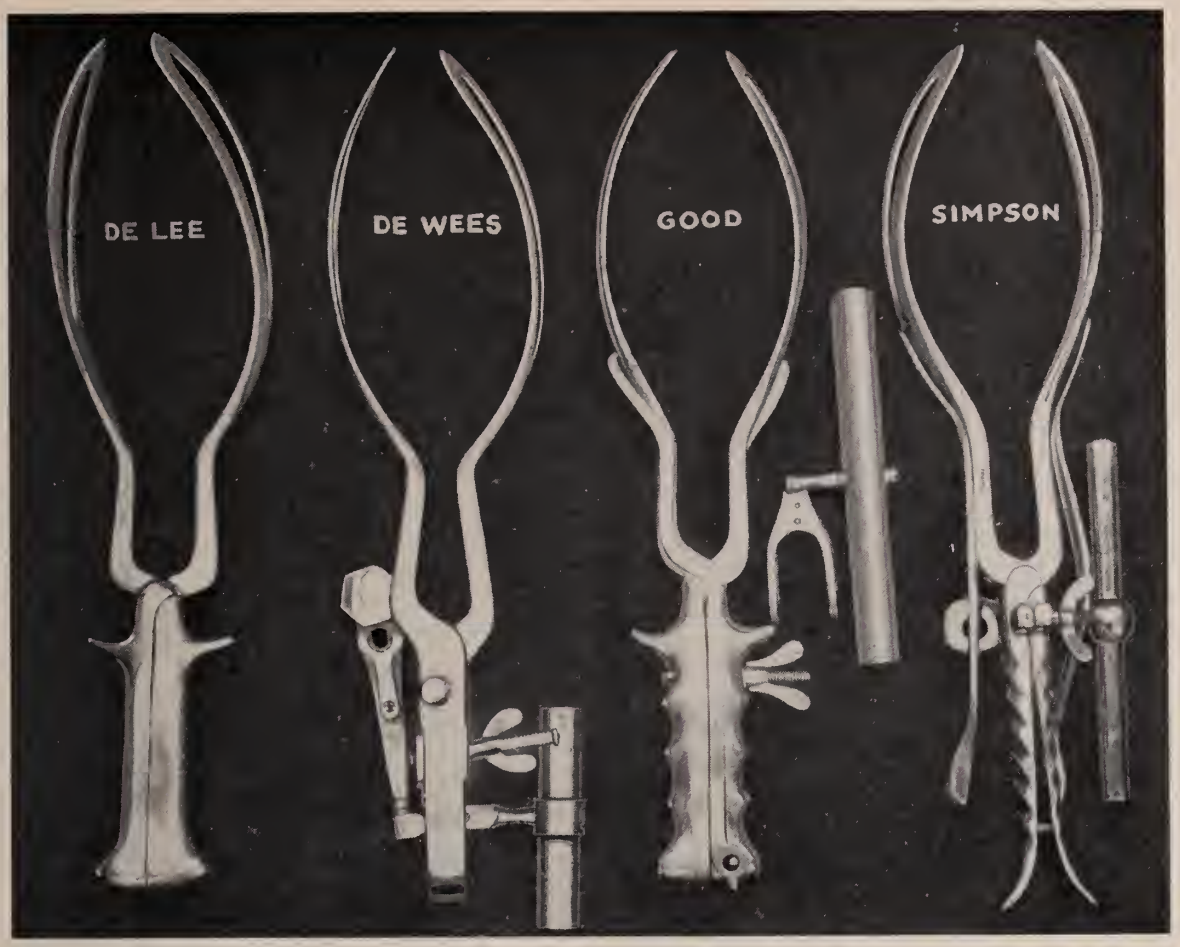


Fig. 3.—Shows Simpson Types.

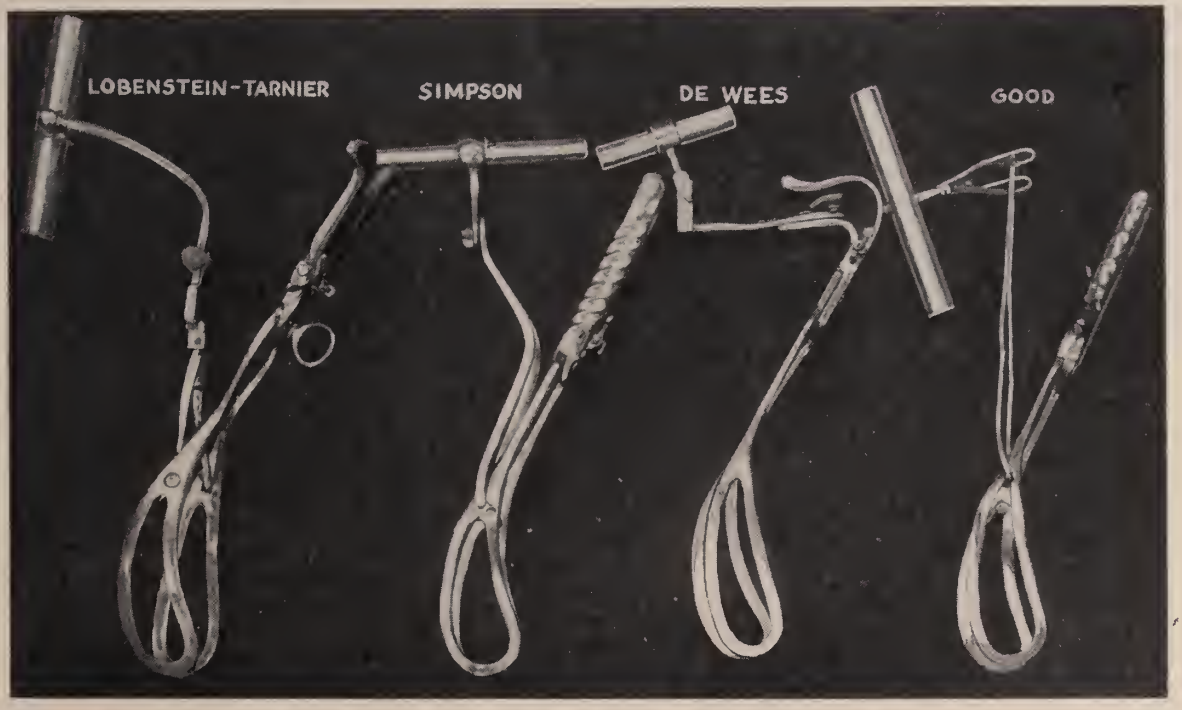


Fig. 4.—Axis-traction Attachments on Simpson Types.

has been designed by Everett M. Hawks and Edward H. Dennen. (Fig. 5)

Several principles are included in this instrument. The advantages of application and traction tend to make the delivery easier and safer. The modified Simpson blades, with the Kielland cushion,

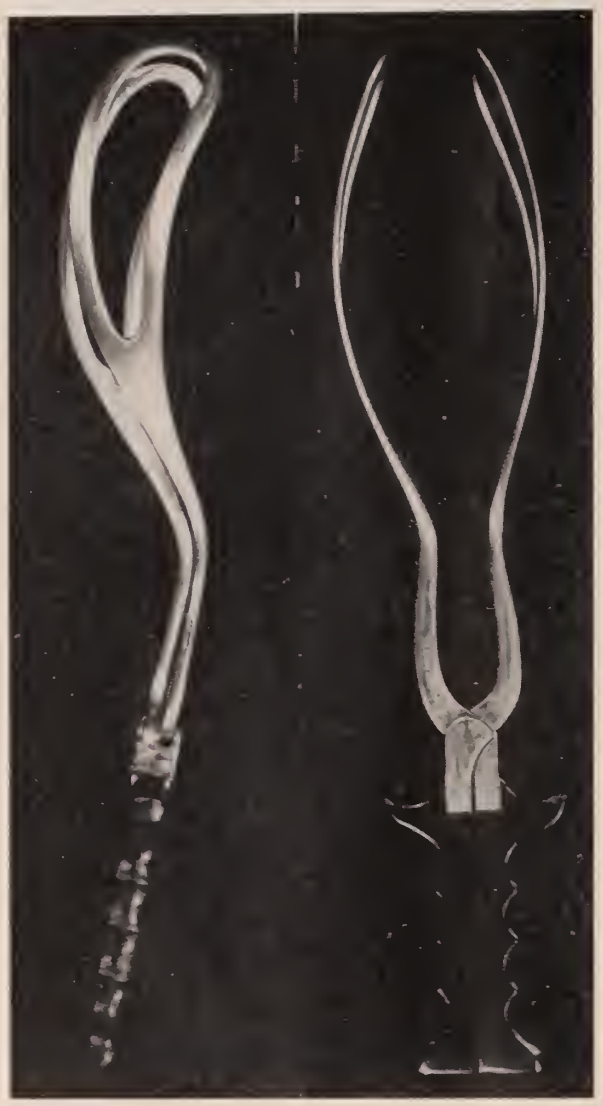


Fig. 5.—The Hawks—Dennen Traction Curve Forceps.

tend to fit the head without pressure points of cutting, and they do not slip, because the tips can be anchored well below the malar eminences. The exaggerated pelvic curve of the posterior lips of the blades permits extension over the perineum with the least amount of pressure on the posterior vaginal wall and sulci. The modified Piper shanks give more spring to the blades, allowing accommodation to heads of different sizes and shapes, with the least amount of compression. The backward curve of the shanks gives axis traction. (Fig. 6)

MID FORCEPS

In the mid forceps operation, more frequently than in the low, the position, as well as the shape of the head, must be considered in selecting a suitable type of instrument. The rules for anterior positions are the same in all stations of the head, with emphasis on axis traction. The DeWees' gives excellent fixed axis traction and is considered the choice by many. With the head in transverse arrest, some operators have developed their skill in the use of manual rotation, and also the gliding or wan-

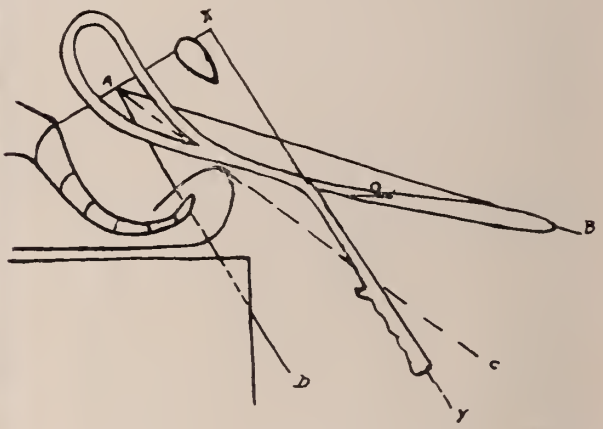


Fig. 6.—Line AB is direction of force applied to classical forceps. Line XY is the plane of handles of traction curve forceps, and is parallel to AD, the true axis traction. Line AC is the resultant of force applied in the direction of XY.

dering maneuver. However, it is not an uncommon experience to find a head which cannot be rotated manually without displacement; or one which refuses to remain anterior during the process of applying the second blade, and locking the handles. In the gliding maneuver, the anterior blade occasionally hits the brow, causing the occiput to rotate backward. This may result in a brow-mastoid application which no amount of manipulation will entirely correct. To simplify this procedure, two special types of forceps have been developed: the Kielland and the Barton. Their chief advantage is the ease with which an accurate cephalic application can be obtained. Both have the sliding lock principle which allows for adjustment on asynclitic heads. The Kielland, since it is built for traction, has a wider field of usefulness, and appears to be the choice. However, the Barton, though less effective as a tractor, often requiring another type to complete the deliv-

ery, is chosen by some because its technic of application is simpler. (Fig. 7)

In posterior positions the single accurate application, without displacement of the head, and semi axis-traction pull with the Kielland favor better results, with less manipulation than the Scanzoni, Pomeroy, and "Key in Lock" maneuvers or manual rotation. Also, the dangers of version in unfavorable cases are avoided. The Barton forceps may be used, but the advantage of traction with the Kielland in most cases makes it the choice.

This applies also the directly posterior occiput when well down in the pelvis. The upside down, direct application of the Kielland's to the sides of the head permits rotation and extraction without readjustment of the blades. The exceptions are a marked anthropoid and a marked android pelvis in which, because of limited space, it is considered necessary to deliver the posterior occiput, as such, without anterior rotation. Here a Simpson type is preferable in order to satisfy the requirements for moulding and for the need of an instrument with a good pelvic curve.

The Jacobs forceps with a swivel attachment of the shanks to solid blades may be used for rotation and traction on posterior positions without reapplication. This should be popular with those who prefer an instrument built along classical lines and applied in the classical manner.

The backward or reverse pelvic curve of the Kielland is a disadvantage in extraction through a narrow outlet with a low symphysis. Unless one is familiar with the special technique for extension with this instrument, it is thought best to remove the forceps after anterior rotation has been completed, and the head flexed and fixed with one or two tractions, substituting a suitable axis-traction forceps of the classical type with a good pelvic curve. This keeps the force in the axis of the pelvis, and lessens the danger of injury to the posterior wall and perineum. Following the proper use of the Kielland, rarely, if ever, are there any badly marked

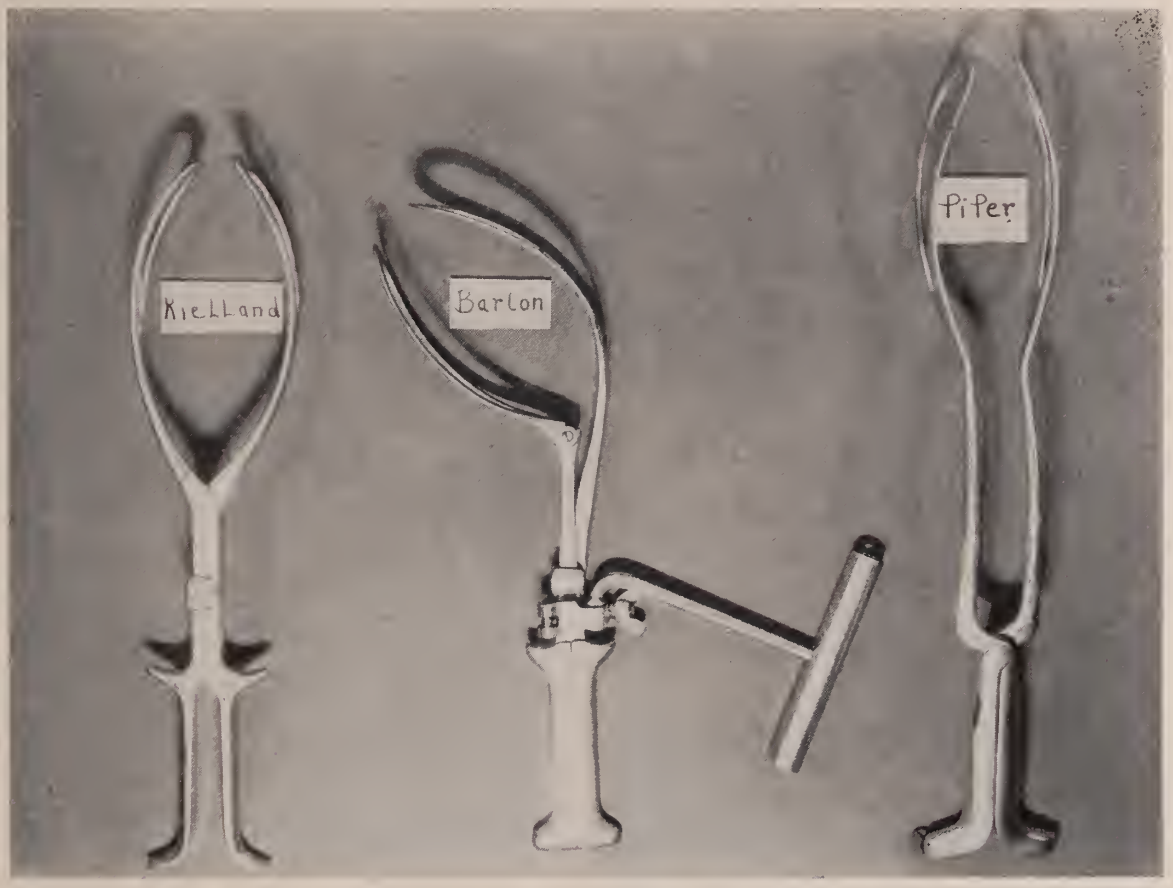


Fig. 7.—Special types of forceps: Kielland, Barton and Piper.

faces or facial palsies. The bevelled surface or cushion on the inside of the blades eliminates the cuts and bruises, and the brow-mastoid application is avoided by using the inversion method of application. Much has been said about the dangers of the Kielland, but, as is true of any instrument, the dangers diminish as the knowledge of its proper use increases. Complicated cases have frequently been made simple by the Kielland, even after unsuccessful attempts with other types.

HIGH FORCEPS

As a rule, a high forceps should be avoided. But occasionally in well chosen cases, with version contra-indicated, it offers less risk than Caesarean section. When the head is arrested in or just below the superior straight, the same principles which apply to mid forceps are used, with one exception. This is a flat pelvis, with the head in the transverse position, and the posterior parietal bone presenting. Here, as was so well shown by Caldwell, the Barton forceps stand alone as the choice. The ease of application diminishes the amount of manipulation; the perfect pelvic curve reduces the amount of effort and minimizes the amount of injury; and the sliding lock permits adjustment as the asynclitism is corrected. If, in addition to a flat inlet, there is also a straight sacrum, the contra-indication to any forceps except the Barton is more pronounced. This principle applies regardless of the station of the head in transverse arrest. (Fig. 8)



Fig. 8.—Shows a straight sacrum, requiring Barton's for transverse arrest.

The Kielland is not chosen because when applied to this type of case its pelvic curve and axis traction cannot be utilized. It increases the angulation of the head, and, consequently, the diameter of the descending part is increased. The necessary preliminary traction in the transverse diameter to bring the head into low-mid pelvis before it can be rotated endangers the symphysis pubis and bladder, against which most of the force is directed. Hence the chief indication for the Barton's is also the main contra-indication for the Kielland's.

The Mann forceps, with flexible blades and a split universal joint, may be used to advantage. After more general use, this unique instrument may prove to be the closest approach to the long sought for universal forceps.

In face presentations, the advantages of the Kielland again make it the choice. This is particularly true when the chin is directly posterior. Here the blades may be applied upside down directly to the sides of the head, with the pelvic curve directed backward. Then rotation of the chin to anterior, followed by extraction, may be done without readjustment of the forceps.

For the after-coming head in breech extractions, the Piper forceps are the choice. The springy blades permit adjustment to heads of different sizes and shapes, with the least amount of compression. The dropped handles make it easy to obtain an application directly to the sides of the head without raising the body above the horizontal. The backward bend of the shanks gives axis traction.†

SUMMARY

1.—In a proper case for delivery with forceps, the two essential requirements are: an accurate cephalic application, and traction in the axis of the pelvis.

2.—A correct diagnosis must be made of the amount of moulding, position and station of the head, and type of pelvis.

3.—Moulded heads require a blade with a long, shallow cephalic curve as in the Simpson type. On round heads the Elliot type fits best.

4.—Instrumental axis traction diminishes the amount of effort and injury, and is desirable in any station of the head.

5.—The large variety of instruments in use shows there is no universal forceps.

6.—In the majority of anterior positions, the Simpson type of blade, with some form of axis traction is desirable.

†Much of this material with additions and alterations is reprinted from "Choice of Instrument in Delivery with Forceps", *New York State Journal of Medicine*, July 1, 1932.

7.—A special traction curve forceps combining features of several instruments, and satisfying the requirements of application and traction may be used on anterior heads.

8.—In most transverse and posterior positions, the Kielland seems to be the choice. Rotation manually, or with the Barton, the Jacobs, or the solid blades, may be used in some cases.

9.—A high transverse head, with a posterior parietal presentation in a flat pelvis, requires the Barton. This applies also to the pelvis with a straight sacrum regardless of the station of the transverse head.

10.—In face presentations, with the chin posterior, the Kielland forceps, and on after-coming heads, the Piper forceps offer advantages.

133 East 80th Street.

Explode Myth.

Exploding the myth that the American Negro is immune to stones in the urinary tract, two Richmond, Va., physicians state that "whatever natural immunity the Negro may have is certainly modified by his mode of living and the frequent occurrence of infection in the urinary tract."

Writing in the December 28 issue of *The Journal of the American Medical Association*, Austin I. Dodson, M.D., and John R. Clark, M.D., from the urological service of the Hospital Division of the Medical College of Virginia, say:

"The frequency with which we encounter calculi [stones] of the urinary tract on the wards of the Hospital Division of the Medical College of Virginia convinces us that although urolithiasis [stones in the urinary tract] may occur less frequently in the Negro than in the white race, it is by no means uncommon. Furthermore, we have observed that stones in the Negro are more frequently accompanied with infection and are far more destructive to renal tissue than those in white patients. The fact that Negroes are more reluctant to seek medical aid and depend more on home remedies than do white people certainly contributes to some extent to higher morbidity and mortality as a result of stone. The same thing doubtless contributes to the fact that calculi are less frequently found among them."

During the 10 year period from 1935 until 1946 there were 2,724 white patients and 1,800 Negro patients admitted to the urological service of the hospital, according to Drs. Dodson and Clark. Of these, 637 white patients and 121 Negro patients had stones in the urinary tract.

The doctors point out that the treatment of Negroes varies considerably from that usually considered advisable for white patients. The percentage of kidney removals is extremely high. Of 62 Negro patients with stone in the kidney, 20 had the kidney removed, while only 26 of 190 white patients were treated with such radical measures. The authors explain this by stating that "because of the difficulty in getting these patients to return for adequate follow-up treatment, more radical surgery usually is required than is necessary in the white patient."

Advances in Sulfonamide Therapy.

Three new principles in sulfonamide therapy are stressed in the scientific exhibit recently installed at the New York Academy of Medicine, by Schering Corporation of Bloomfield and Union, New Jersey. Based on recent clinical publications appearing in the medical literature, these factors are used in three different products which materially enhance the effectiveness of sulfonamides against infections.

This display has been viewed by thousands of physicians and is another scientific exhibit presented by Schering Corporation, manufacturer of endocrine, x-ray diagnostic, chemotherapeutic and pharmaceutical products.

OCCIPUT POSTERIOR AND ITS TREATMENT*

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Norfolk, Virginia.

In occiput posterior position, the presenting part is in one of the posterior quadrants of the maternal pelvis. Right occiput posterior position is more frequent than left occiput posterior position. Occiput posterior is considered a normal position by many and the majority of them deliver spontaneously and with ease. Only careful study would cause one to appreciate the normality of most occiput posterior cases and it would be hard to recognize them from the occiput anterior cases unless they were followed very thoroughly.

Calkins[1] states that "occiput posterior occurs almost as frequently as occiput anterior and that it does not produce a significant increase in either maternal morbidity or fetal mortality." In a study of cases, he concluded that the duration of the labor is dependent more upon the condition of the cervix and the character of the labor contractions rather than the posterior or the anterior position of the fetal head. Persistent occiput posterior position with arrest is considered a complication of a mechanism which is usually spontaneous and normal.

Paul Klingensmith[2] states that in a study of 4,164 deliveries, primary occiput posterior position was present in 25 per cent of the cases; that posterior rotation occurred in 2.3 per cent of all cases; that is, that one case of each 12 of the primary occiput posterior cases rotated posteriorly rather than anteriorly. We think of the fetal head, when engaging at the pelvic inlet, of adapting itself to that diameter which it best fits.

X-ray study, particularly by Thoms,[3] has shown that engagement of the fetal head as a posterior position is predisposed by a shortening of the transverse diameter of the inlet. Without any pelvic contraction and with a small fetal head, it may be a matter of chance as to whether engagement is in the anterior, oblique, or posterior position. In the anthropoid type of pelvis, not only does the head engage as a posterior position most frequently, but also internal rotation of the fetal head is prevented by the transverse contraction of the mid pelvis. When dystocia occurs with this type of pelvis, even rotation with forceps at the level of the arrested head may become difficult.

With the mechanism of labor, a fetal head, after engaging as an occiput posterior, has the possibility of then rotating anteriorly with delivery; rotating posteriorly with delivery or failing to rotate with arrest. The fetal head, when rotating anteriorly through the long arc of 135°, descends constantly unless obstruction is met. Imperfect flexion is the rule as descent occurs and the pressure of the pelvic floor tends to complete the flexion of the head. The failure of flexion at this stage substitutes a greater diameter of the fetal head than the sub-occipito-bregmatic diameter of flexion. With the head on the pelvic floor and flexion completed, the anterior rotation of 135° occurs as the occiput comes to lie directly behind the symphysis pubis. After 90° of rotation has occurred, the occiput posterior becomes in all respects an occiput anterior and from thereon its mechanism is the same.

In posterior rotation and with descent, likewise there is imperfect flexion and the rotation through the short arc of 45° occurs, causing the occiput to lie in the hollow of the sacrum at a level below the ischial spines. With further descent, and with the head in a state of deflexion, the large fontanel passes beneath the symphysis and the occiput is born by flexion and then by extension to complete the birth of the head. This is followed by restitution and untwisting of the neck. The perineum and the outlet is stretched and has to accommodate a circumference of the fetal head nearly as great as the occipito-frontal circumference, which is much larger than the suboccipito-bregmatic circumference. The outlet is subjected to this much greater stretching whenever a fetal head is delivered by forceps with the face to pubis and deep laceration can result.

Delayed rotation with imperfect flexion and molding with deflexion are factors in occiput posterior dystocia.

Anterior rotation through the long arc occurs more often and is much easier. Arrest with it is less frequent. Anterior rotation results from the resistance of the pelvic floor and from the resistance of the bony contour of the pelvis.

*Read before the annual meeting of the Medical Society of Virginia, at Virginia Beach, October 14-16, 1946.

Posterior rotation is more common in multiparous cases and relaxed perineum with lack of levator resistance is a factor in its occurrence. Poor expulsive force, deflexion of the fetal head, contraction of pelvis, relative disproportion and pelvic deformity of the sacrum and the bony outlet are frequently factors in occiput posterior arrest.

Failure of labor to progress during the second stages would cause one to suspect the possibility of arrest. Confirmation of the diagnosis can be made by careful physical and vaginal examinations. Edema of the scalp may obscure the palpation of the fontanels and sutures, and if the use of forceps is anticipated, it is sometimes necessary to feel for and identify the position of a fetal ear.

TREATMENT

When a diagnosis of persistent occiput posterior is made, the first and best treatment is conservative expectant waiting. This would include, allowing the patient to walk, positional treatment, prevention of exhaustion and the use of sedation and rest. If the first stage has not been prolonged, the period of conservative observation can be extended much longer than with a prolonged first stage of labor. Immediate interference would be indicated by either fetal or maternal distress or whenever a definite diagnosis of occiput posterior dystocia is determined. The method of interference would be to the liking of the physician. Many methods are used with satisfactory results. Internal podalic version has been used where failure of other methods has occurred.

Manual rotation, or manual rotation followed by forceps delivery, is perhaps the more popular method.

There are many descriptions of the means for manually rotating an occiput posterior position. Manual rotation alone is very effective in the multiparous case, but failure is frequent in the primipara where molding and imperfect flexion is present and the fetal head, after dislodgement and rotation, tends to return very quickly to its former position. When manual rotation is effected, immediate forceps application can be made with the head held in position by the fingers of the hand used in rotating the fetal head. Manual rotation without an anesthesia is quite painful to the patient and, with anesthesia, labor contractions are more often stopped temporarily. For this reason, manual rotation and forceps are combined to effect delivery.

The Scanzoni maneuver of forceps rotation with removal and forceps delivery is very effective in facilitating delivery. Occasionally difficulty occurs when, after removing the forceps (with rotation completed), the head tends to return to its original position. Pulling the head down after, or while rotating it, has been offered as a preventive when the head tends to turn back before the next application of forceps can be made. Mention should be made that a wide arc and sweep of the forceps handles should be used in rotating the head with forceps. This causes the head to turn in a pivotal axis, which, in turn, prevents overstretching in the pelvic canal and possible mid pelvic laceration.

After using the Scanzoni method more or less routinely for a long time and in cases where traction of a greater degree was necessary, I have rotated with either a Simpson forceps or with a Kielland forceps and reapplied an axis traction forceps for delivery. It was noticed that when one blade of the first forceps application was left in place, it would fix the position of the fetal head in an anterior position and prevent its spontaneous return to its former position. By applying the opposite blade of the axis traction forceps, then this blade could be used to fix the position of the fetal head. The remaining blade of the Simpson forceps is then removed and the second blade of the axis traction forceps applied and followed by locking and traction for delivery. From this, I began the routine use of duplicate pairs of forceps of any type or a combination of forceps of any different type, using the principle of fixing the head in position with the remaining blade of the forceps used in the rotation. In rotating the head anteriorly, slight over-rotation is advised. When removing the first blade of the initial application, the help of an assistant is necessary to hold the handle of the remaining forceps in order to fix the position of the head. Otherwise, both the head and the remaining blade will tend to turn back to its original position. When the first blade of the second pair of forceps is applied, the blade remaining is upside down. The upside down blade is removed and the second blade of the second pair of forceps replaces it and traction is then made. When applying the forceps for rotation, a good cephalic application is desirable. The second or duplicate pair of forceps when in position has been (of necessity) a pelvic application. A cephalic ad-

justment, or so-called "sliding", can then be done to get a perfect application.

For the first application, I prefer the use of either a Simpson or a Kielland. For the duplicate, I prefer the Luikart modified Simpson forceps, or, if traction is to be more than usual, an axis traction forceps—preferably the DeWees axis traction forceps. The description of this modified Scanzoni is rather long and perhaps may appear difficult. I have found it very practical and the ease and success from its use has helped me in many a case with occiput posterior delay or arrest. It is easier to demonstrate it than to describe it.

SUMMARY

(1) The mechanism of labor normally causes occiput posterior position either to rotate 135° anteriorly and deliver, or to rotate posteriorly 45° and deliver. Anterior rotation is the easier and more normal. Deflexion delays and flexion facilitates rotation.

(2) Delayed rotation, arrest and dystocia with occiput posterior is regarded as a complication of the mechanism which is usually spontaneous and normal.

(3) The anthropoid type of pelvis, with shortening of the transverse diameters of the pelvis, predisposes to engagement as an occiput posterior. With a small fetal head and with no bony or other resistance, chance may play a part in the position in which the fetal head engages or adapts itself to the inlet.

(4) Persistent occiput position need not be dreaded because effective means of rotation and delivery can be effected. It is a distinct advantage to the mother and child to shorten the second stage of labor with delayed rotation where the first stage has been very much prolonged.

(5) A modified use of duplicate forceps, for forceps rotation and forceps delivery has been described in this paper. Its principle is much the same as in the Scanzoni method. I have found it very practical when need for interference in delayed occiput posterior position has occurred.

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DISCUSSION

DR. WAVERLY R. PAYNE, Newport News: This is a timeworn but timely subject because this condition is encountered by the general practitioner and the obstetrician alike. Its occurrence is well established; and is considered by some, as Dr. Savage has mentioned, a normal presentation and position. We recognize that the occiput posterior is a common cause of prolonged labor and may delay delivery considerably. Accurate diagnosis and accurate pelvic measurements are essential. Since many of these cases will rotate spontaneously, well chosen analgesia, watchful waiting, and the administration of intravenous fluids when necessary are all essentials to the good management of labor with occiput posterior position. All too frequently interference is inadvisedly resorted to. I agree with Dr. Savage's indications for delivery and would like to add a few suggestions.

First of all, in the arrested occiput posterior, or if for other reasons it is necessary that the patient be delivered, spinal anesthesia should be seriously considered. For many years we have used spinal anesthesia, 50 mg. of procaine hydrochloride given in either the third or fourth interspace. The anesthesia is very prompt, relaxation is complete, and the effect on the baby is nil.

Second, manual rotation is safer than forceps rotation, although I certainly should like to compliment Dr. Savage on his fine description of the method he has adopted in using duplicate forceps. I think it is a splendid idea, and it certainly overcomes one of the difficulties often encountered in attempting to do a Scanzoni operation using only one pair of forceps.

Finally, I should like to call your attention to the fact that many of these cases can be delivered rather easily in the posterior position. Dr. Lewis Douglas, of Baltimore, in a paper read before the Virginia Obstetrical and Gynecological Society some years ago, reported approximately 200 cases delivered in the posterior position. He emphasized the importance of good anesthesia and a deep episiotomy. I have found that method of management entirely satisfactory in many cases which would have been very difficult to rotate.

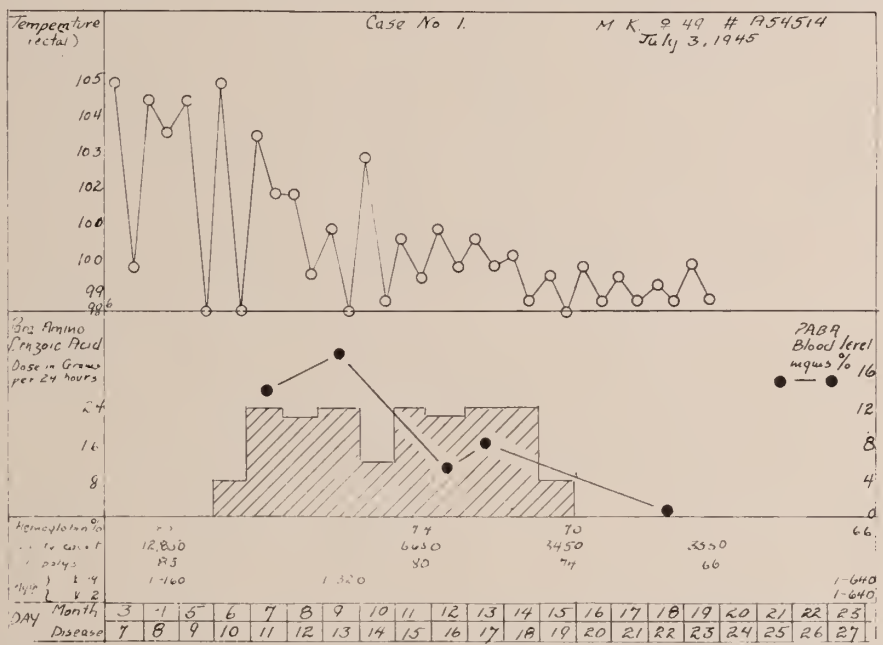
In conclusion, I would like to leave these thoughts with you: that in dealing with cases of occiput posterior and the usual long labor, pay attention to the patient's general condition, use analgesics advisedly, and when delivery is necessary consider low spinal anesthesia and deep episiotomy of the mesiolateral type.

PARA-AMINOBENZOIC ACID IN THE TREATMENT OF ROCKY MOUNTAIN SPOTTED FEVER*

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and
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Rose, Duane, and Fischel have recently reported one case in which they used para-aminobenzoic acid in the treatment of spotted fever.[1] Their patient, a 46 year old woman, showed a satisfactory clinical response 36 hours after receiving the medication, and the authors believe the drug may have some effective therapeutic value in the treatment of this rickettsial infection. The drug was used rather extensively during the war in the treatment of louse borne typhus by the United States of America Typhus Commission at the Fever Hospital in Cairo, Egypt.[2] Other observers have shown experimentally that para-aminobenzoic acid will inhibit the growth of typhus rickettsial organisms and spotted fever rickettsiae on the yolk sac membrane of chick embryos,[3,7] and protect mice which have been given experimental typhus.[4] Anigstein and Bader found para-aminobenzoic acid to be effective therapeutically when given to guinea pigs which had been inoculated with the rickettsial organism responsible for Rocky Mountain spotted fever.[5] Our interest in the drug was prompted by an editorial in the *Journal of the American Medical Association,* which suggested para-aminobenzoic acid be tried in Rocky Mountain spotted fever.[6] We see spotted fever in increasing numbers, and it is our belief that this disease is becoming more important in this section of the country. We report on four patients treated with para-aminobenzoic acid during the summer of 1945.

In selecting the material for study, we took only those cases in which we were reasonably sure the diagnosis of spotted fever was justified. Based on the history, hospital course, and laboratory findings, four representative cases were selected for report. Other patients were treated with the drug, but are excluded from this report because we cannot clearly distinguish the diagnosis in them from murine typhus. During the summer of 1945, there was one small locality in this state which had a high morbidity as well as a high incidence of infection. Two of our patients, husband and wife, No. 3 and No. 2,



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came from this county. Both seemed quite ill on admission to the hospital, as did the other two cases, one of whom, No. 4, was admitted to the pediatric service of the Medical College of Virginia Hospital.

Case 1—No. A-54514—Fig. 1. A 49 year old married Negro housewife was referred to St. Philip Hospital with the chief complaint of fever and a tentative diagnosis of Rocky Mountain spotted fever. Seven days before admission, the patient complained of feeling ill without any specific complaints. Three days later a rash appeared on her arms and spread progressively to forearms, legs, trunk, back, and neck. At the same time she began to run a high fever, became disoriented, and remained so up to the time of admission. The patient lived in an area which is infested with ticks, but at the time of admission no history of tick bite could be obtained. Other members of her family had removed ticks from their bodies and from the dog. When admitted to the hospital the patient was ill, severely dehydrated, and disoriented. Her temperature was 105 degrees; pulse was 130; respiration was 30; and blood pressure was 100 systolic over 70 diastolic. There was a maculo-papular hemorrhagic eruption which was both discrete and confluent over almost the entire body with the exception of the face where it was faint. It was most pronounced on the upper arm and forearm, buttocks and thighs, and was present—but not pronounced—in the palms and soles. The anterior cervical lymph nodes were slightly enlarged, discrete, but non-tender. There was a questionable enanthem. Over the lower lobe there were a few moist inspiratory rales, but no other changes in the lungs. The cardio-vascular examination was negative except for the tachycardia. No other abnormalities were noted.

The admission diagnosis was Rocky Mountain spotted fever with secondary pneumonitis.

Admission laboratory studies disclosed a hemoglobin of 85 per cent (Sahli), a white count of 12,850 with 83 per cent polymorphonuclear leucocytes, 1 per cent eosinophiles, 1 per cent monocytes and 15 per cent lymphocytes. The urine was straw, acid, specific gravity of 1.008, with 3 plus albumin. The sediment was negative. Blood sugar and non-protein nitrogen the following morning were 105 and 28 mgms. per cent respectively. Agglutinations for typhoid "H" and "O", para-"B", and brucella were reported negative. The Felix-Weil reaction for proteus X-19 was positive 1-160. Five days later this agglutination was titered at 1-320, and the others remained negative. Wassermann was negative.

Para-aminobenzoic acid was begun on the fourth hospital day with initial dose of 8 gms., and then 2 gms. every two hours. Para-aminobenzoic acid blood levels were 14 mgms. per cent on the second day after starting the drug, and on the fourth day 18 mgms. per cent. The patient's condition was critical for the first few days of her hospitalization, with periods of great delirium and disorientation. At other times she was cooperative, and took the medication well despite the bulky nature of the drug. Three days after starting the para-aminobenzoic acid, her delirium cleared, fever lessened, and her appetite returned. After this she improved rapidly, and the medication was discontinued after ten days. She was able to give us a history of a tick bite before being taken ill. She was discharged as cured on the 21st hospital day with medication for the iron deficiency anemia.

Case 2—Fig. 2. A 60 year old married housewife was referred to the hospital with fever of four days' duration. She was a known diabetic of twenty years' duration, and had had two previous hospital admissions for regulation of her diabetes and treatment of infected callus of the right foot. Her diabetes had been regulated on protamine zinc insulin 40 units and regular insulin 20 units every morning.

The present illness began two weeks before admission with the onset of generalized malaise and anorexia. Later a slight cough and "hot" spells developed. Four days before admission she found her temperature was running between 101 and 104 degrees. Her physician gave her sulfadiazine 0.5 gm. every two hours which she took until the time of entry to the hospital. Two days before admission she removed two ticks from under her axilla, and felt so badly with headache she went to bed. On the day before admission she neglected her insulin, although she had been taking it regularly for twenty years, and on the day of admission she became confused.

Physical examination disclosed an elderly, well nourished and well developed woman who appeared acutely ill. Her temperature was 103 degrees with a pulse rate of 105 and respiration of 24. The blood pressure was 132 systolic over 82 diastolic. The physical examination was essentially negative except for a rough grade 2 systolic murmur at the apex.

The impression on admission was uncontrolled

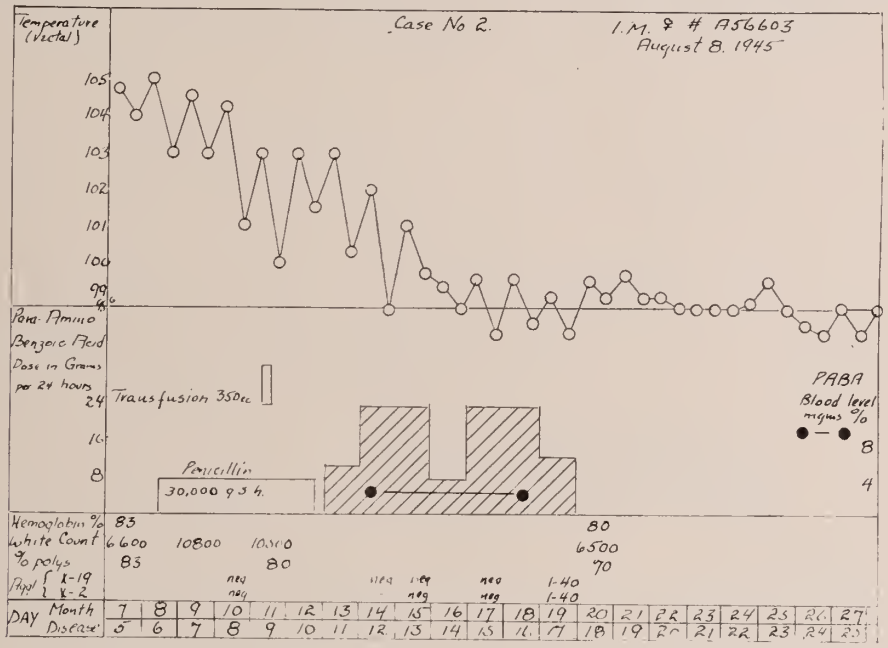
diabetes, diabetic acidosis and atypical pneumonia, after a roentgenogram of the chest showed moderately increased bronchovesicular markings in the right chest suggesting atypical pneumonia. The diagnosis of spotted fever was entertained since the woman came from a region of the state where spotted fever was known to be present in a particularly virulent form.

Laboratory work on admission showed a red cell count of 4,150,000 with 83 per cent hemoglobin; a white count of 6,600 with 83 per cent polymorphonuclear leucocytes, 16 per cent lymphocytes, and 1 per cent basophiles. The urine was cloudy, acid, specific gravity 1.030, with 2 plus albumin, and 3 plus sugar and acetone. The sediment contained occasional granular and hyaline casts. Blood sugar was 540 mgm. per cent; non-protein nitrogen was 41 mgm. per cent and carbon dioxide combining power was 52 volumes per cent. Wassermann was negative.

Initial treatment was to control the acidosis. She was given 30 units of regular insulin immediately, and in four hours 40 more units of regular insulin with 180 cc. of orange juice every two hours. In six hours the acidosis was controlled, and she was well in balance the next morning.

All blood and stool cultures were negative. A urine culture grew B. lactis aerogenes. The routine agglutinations were negative except for typhoid "O" which was positive 1-80. Because of continued elevation of temperature, penicillin was begun after all bacteriological studies had been obtained. The day after admission a few small hemorrhagic areas were first seen on the elbows and arms. In the next twenty-four hours this spread to the trunk and legs. The rash remained faint, but was definitely a rickettsial type of eruption, and was present in the palms. At this time, slight icterus was observed clinically, and an icteric index was 22 units. The spleen became palpable, firm, but nontender. The liver was not palpable.

Her diabetes remained fairly well controlled although it was difficult to get her to eat. Penicillin showed no effect either clinically or on the temperature, which persisted; so, it was discontinued. Paraaminobenzoic acid was begun on the seventh hospital day with initial dose of 3.0 gm. followed by 3.0 gm. in one-half an hour, and 2 gm. every two hours thereafter. The impression at this time was Rocky Mountain spotted fever.

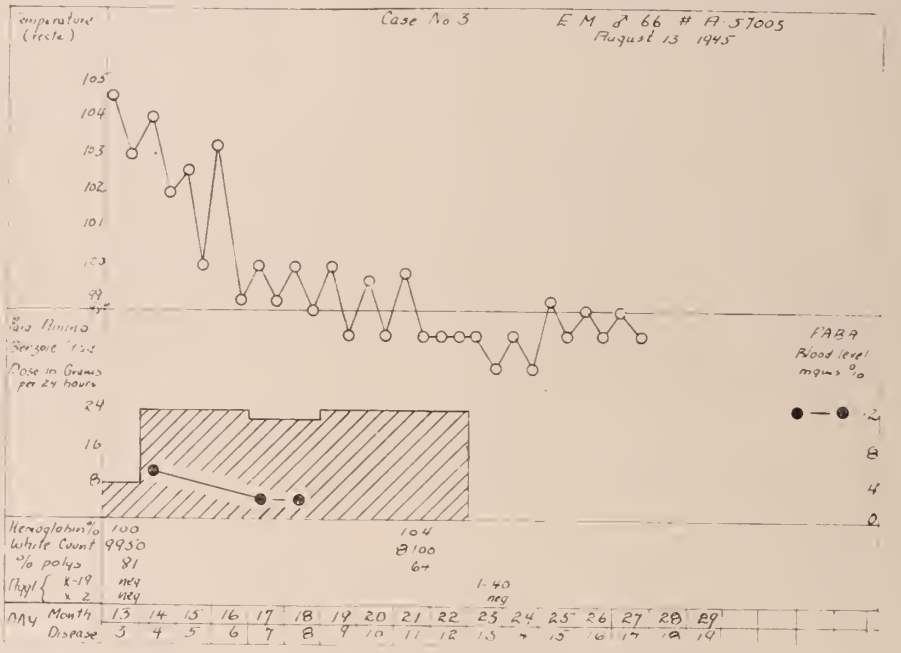


During the period when the rash was most prominent, she was nervous and at times mildly confused. There was slight nausea after taking the medication, but generally she was cooperative. Two blood calcium determinations were done, and reported as 8.2 mgm. per cent and 7.2 mgm. per cent. Trousseau and Chevostek signs were not elicited.

She showed improvement following the administration of para-aminobenzoic acid and tolerated the drug fairly well. On the eleventh day of hospitali-

zation, the agglutinations of OX-19 and OX-2 were reported positive in a dilution of 1-40. She was discharged on the twenty-ninth hospital day, cured of her infection and with the diabetes regulated.

Case 3—Fig. 3. A 66 year old married cattleman (husband of patient No. 2) was referred to the hospital because of suspected spotted fever. The patient had been well until two days before admission when he began to feel "below par". In the next two days he became progressively weaker and had fever. There were no other symptoms. He was seen by his family physician who observed a rash and sent him to the hospital.



Six years before admission, he had been treated for a myocardial infarction. Six months before admission, he had an episode of rather severe chest pain and dyspnea, and had been advised to rest more. Two years before admission, he developed a granulomatous lesion on his penis not associated with pain or discharge. Concomitantly he developed painless swelling of the right testicle.

The patient was an obese man, mildly disoriented and emotionally disturbed with unprovoked outbursts of weeping. His temperature was 103 with a pulse rate of 105 and respiration of 20. The blood pressure was 200 systolic over 100 diastolic. There was a maculo-papular hemorrhagic eruption over the trunk and extremities and on the outer edges of the soles of the feet. In some areas the eruption faded on pressure. The eyes were tearing with puffy lids and injected conjunctiva. His pupils were miotic, but reacted to light. The chest was large and emphysematous, and moist rales were heard in both lung bases. Apex impulse was not seen or felt, but the left border was thought to be slightly outside the left mid-clavicular line. The rhythm was regular, but the heart sounds were faint, and there was a faint systolic murmer at the apex. The abdomen was obese and difficult to palpate, but one observer thought the spleen was palpable. There was a foul granulomatous discharging growth on the foreskin which prevented retraction, and the right testicle was enlarged and tender. No lymph nodes were palpable.

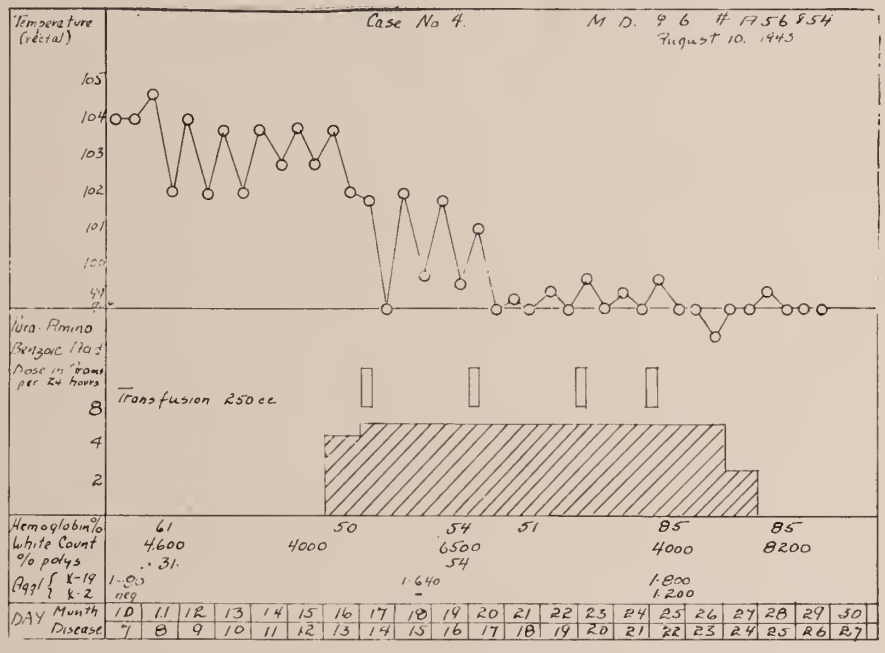
The admission impression was Rocky Mountain spotted fever.

The laboratory work disclosed a hemoglobin of 100 per cent with 5,500,000 red blood cells and 9,950 white blood cells with 81 per cent leucocytes, 12 per cent lymphocytes and 7 per cent monocytes. The urine was amber, acid, with a specific gravity of 1.021, 2 plus albumin, much amorphous matter, and 10-14 white blood cells in the sediment with only an occasional granular cast. Blood sugar and non-protein nitrogen were normal. Agglutinations for proteus X-19 and OX-2 were negative. Wassermann was negative.

Para-aminobenzoic acid was started immediately with an initial dose of 4.0 gm. which was repeated in thirty minutes, then 2.0 gm. every two hours.

PABA blood level the following morning was 5.6 mgm. per cent. A roentgenogram of the chest showed the lungs clear and cardiothoracic ratio of 55 per cent, but there was slight enlargement of the thoracic aorta with slight pulsation and pressure on the esophagus. Blood calcium level on the second day was 8.2 mg. per cent, and five days later was 8.1 mgm. per cent. No Chevostek or Trousseau sign was elicited.

Clinically, the patient made a response soon after hospitalization with a drop in temperature by lysis. The rash began to fade and was gone in four days. Some difficulty was encountered in administering the



para-aminobenzoic acid during the first three days when he was partially disoriented. Thereafter he improved rapidly, and was discharged on the twenty-fourth day.

Case 4—Fig. 4. A six year old Negro girl was referred to the hospital with the diagnosis of poliomyelitis.

One week before admission, she was taken suddenly ill with headache, fever, and diarrhea. There was marked anorexia, and one to three watery stools a day. Three days before admission she began to complain of pain in her legs, back, and neck. There was no nausea or vomiting. She gave no history of tick bite. Discomfort in her legs prevented her from moving about. Water was obtained from an outside well near the patient's home in the country.

Past history was non-contributory. She had had measles, pertussis, varicella, and mumps all within the past year.

Physical examination revealed a well nourished, well developed, moderately dehydrated little girl who was irritable and complained of pain on handling her limbs. Her temperature was 104 degrees with a pulse rate of 120 and respiration of 30. The remainder of the examination was not remarkable except for pharyngeal injection, generalized abdominal tenderness, questionable spasm of the hamstring muscles and weakness of the legs.

The admission impression was poliomyelitis, and a lumbar puncture was performed which was within normal limits. Other laboratory work disclosed a hemoglobin of 61 per cent with 4,600,000 red blood cells; 4,600 white blood cells with 36 per cent leucocytes and 64 per cent lymphocytes. The urine was negative except for many bacteria and a few white blood cells, which were not present on subsequent examinations. A blood and stool culture and all routine agglutinations were negative, but the Felix-Weil reaction for proteus X-19 was positive in dilution of 1-80.

Treatment was entirely symptomatic, and on the fifth day, without any improvement, a maculo-papular hemorrhagic rash was present over the upper extremities and stomach. The child was very toxic. The next day the rash was present in the palms, and the X-19 agglutination was positive in dilution of 1-640. Para-aminobenzoic acid was begun with

a 3.0 gm. initial dose, and 1.0 gm. every four hours. Therapy was supplemented with whole blood transfusions. Two days later she seemed clinically much improved. Five days later she was very much better, with a return of appetite and disappearance of the rash, and slight desquamation over the upper abdomen. The agglutination rose to 1-800 for X-19, and 1-200 for the OX-2 reaction. Para-aminobenzoic acid was given for eight days and the patient was discharged on the twentieth hospital day cured.

COMMENT

Four cases constitute too small a number from which to draw conclusions, but they serve to augment the literature which may accumulate concerning therapeutic trials of various chemotherapeutic agents. Four graphic representations of the febrile response and blood level concentrations, as well as other data concerning the hemogram and agglutinations, are presented with this report. There is a noticeable similarity between the response shown by Rose's patient and the fever graphs from our patients. Furthermore, the fever charts presented by Yeomans in his patients treated with para-aminobenzoic acid have a similarity to our graphs.[2] In typhus fever, it was felt that early administration of the drug is most advisable to obtain the greatest therapeutic advantage. In three of our patients, the para-aminobenzoic acid was not begun until late in the first week of the disease, as calculated from the history given by the patient. In one patient (No. 3), the drug was begun on the third day of the disease, and clinically this case showed the most striking response. It is our feeling that this drug modifies the severity of the infection, and hastens an early recovery from the illness. We believe that the earlier the drug can be given, the more effect it will exert. It would appear that our patients showed a response within forty-eight hours after the drug was begun. Return of appetite and absence of mental confusion were early signs, as well as a return of a feeling of well being. Unfortunately we do not have any controls on our patients. Three cases were in the older age group where the disease is more severe and carries a higher mortality. None of our patients showed any deleterious effects from the medication. We feel that this drug has a definite value in the treatment of Rocky Mountain spotted fever.

Following the plain outline by Yeomans in administering the drug, we gave an initial dose of 6-8 gm. followed by 2.0 gm. every two hours.[2] No tablets were available to us, and the powder was put up in 0.5 gm. capsules, which were large, bulky and difficult to swallow, particularly by the confused patients. It was easier to suspend the drug in water and have the patients take it that way. Sodium bicarbonate in a 1.0 gm. dose was given every three or four hours in an attempt to keep the urine alkaline. Fluids were forced orally to 2,500 cc. daily, and no cases of azotemia or anuria developed. Case No. 1, with the highest blood levels, developed a slight leucopenia, and the drug was omitted. The other cases did not show a significant drop in the white blood cell count.

At present, the most effective dose for treatment and the relation of the para-aminobenzoic acid blood level to the response are not known. Working with the rickettsiae of spotted fever in chick embryos, Hamilton concluded that the minimal effectual dose to significantly inhibit the growth of the organism, and prolong the life of chick embryo artificially infected with the rickettsiae was of the order of plus or minus 0.25 mgm. of para-aminobenzoic acid per egg. The average volume of an egg is about 50.0 cc. Assuming equal distribution of the drug, this would mean a concentration of about plus or minus 0.005 mgm. per cubic centimeter in each egg. Blood levels in three of our cases were 2.0 mgm. per cent and above, or 0.02 mgm. per cubic centimeter of whole blood. Since rickettsial organisms proliferate within the endothelial cells of the vascular bed, we may assume that they are in contact with a concentration of 0.02 mgm. per cubic centimeter of para-aminobenzoic acid. The implication is that our concentrations were about five times the minimal effectual concentration observed by Hamilton in chick embryos. The response in our patient (No. 1) with the higher blood level was in no wise different than the response in the patients with the lower blood level. Certainly more investigation should be done along this line.

SUMMARY

1. Four cases of Rocky Mountain spotted fever treated with para-aminobenzoic acid are presented. All patients recovered.

2. It is our belief that para-aminobenzoic acid exerts a definite therapeutic effect on this disease in both modifying its severity and hastening recovery.

3. No conclusions can be drawn concerning the optimal blood concentration of the drug which is apparently quite safe. Given in doses of 6-8 gm. initially and 2 gm. every few hours, one patient developed slight leucopenia.

44. Further investigation should be done as regards the treatment of Rocky Mountain spotted fever with para-aminobenzoic acid.

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UNRRA Health Division Closes.

The UNRRA Health Division, the largest international health organization the world has yet known, will wind up its activities on 31 March 1947, after more than three years of work. During this time UNRRA has made available to the health departments of 13 liberated countries the advice and assistance of its international health staff, and has also given medical and sanitation services to over a million men, women and children in the camps for displaced persons in the Middle East, Germany, Austria and Italy. To make this work possible it was necessary to recruit from 35 countries a staff totaling nearly 1,200 professional persons, including doctors, nurses, sanitary engineers, epidemiologists, nutritionists, and experts in medical supplies and hospital equipment.

For several months now, the Health Division has been handing over phases of its activity to the Interim Commission of the World Health Organization.

In order to make it possible for the Interim Commission to carry on some of UNRRA's health work pending the full establishment of the World Health Organization, UNRRA has authorized the transfer of one and one-half million dollars to the Commission.

The Eye-Bank for Sight Restoration.

Mrs. Henry Breckinridge, Director of The Eye-Bank for Sight Restoration, Inc., announces that experimentation for the improvement of vision in eyes damaged by hemorrhages as a result of injury or other causes has met with success.

Dr. Milo H. Fritz—the recipient of the Florence Ellsworth Wilson Memorial Fund Fellowship—removed a quantity of cloudy fluid from the back portion of the eye and replaced it with clear spinal fluid taken from the patient's own spine. It is too early yet to predict the ultimate result of this experiment, but the patient was able to see large objects about the ward on the morning following this operation.

So far as is known, this has been done by but one surgeon previously—Hegner in Germany in 1928. This operation is similar to that in which the vitreous humor of a donated eye is used to replace cloudy vitreous in the blind eye of a living patient, but may prove to be a more successful method.

JUVENILE RHEUMATIC FEVER

LOUIS A. EIGEN, M.D.,
Arlington, Virginia.

In 1895, Abraham Jacobi, who has been justly called the "Father of Modern Pediatrics," wrote as follows: ". . . acute articular rheumatism is frequent both in infancy and childhood. Since I have made this statement nearly thirty years ago, after observations extending over more than twenty years, a few authors have accepted and verified it; but the vast majority are of the opinion, inherited from their predecessors, that infancy and childhood are immune, or almost so. Thus—only seventeen years ago Edelfson reported to the German Congress for Internal Medicine but eleven cases of acute rheumatism under five years, none of which were younger than two. The assertion that the disease is rare under four is frequently met with. Nothing can be more erroneous . . . nor is the number of rheumatic cases limited to those exhibiting cardiac symptoms. . . . The persistent notion that rheumatism is a rare disease gives rise to an erroneous diagnosis—the ubiquitous 'dentition', 'worms', 'malaria', and 'colds'—and to false treatment. . . . pharyngitis has long been known to be connected with rheumatism, or rather to precede it. It is assumed with more than mere probability that the coccus invasion which is the cause of what we call rheumatism takes place through the pharyngeal lymph bodies, the separate follicles, and the tonsils. That is why there is no better preventive than the hygiene and treatment of the mouth and throat, from mere systematic cleanliness to resection of tonsils, and removal of adenoids."

These views were taught by this intellectual giant seventy-three years ago—even before the "Civil War". We are just now beginning to catch up with him, and to appreciate the clear-cut picture which he painted of the "rheumatic situation".

"We now know that acute rheumatism begins as a disease of school age (5-14), . . . It is estimated that this infection is responsible for 80 per cent of the deaths from heart disease under twenty years of age and 40 per cent of the total cardiac mortality itself, the principal certified cause of death in England", states Sir George Newman, in his Presidential Address, in opening the International Conference on Rheumatic Diseases, held at Bath, England, in 1928.

Although rheumatic fever in infancy is an unusual and rare finding, it is interesting to note that the literature contains a sufficient number of reports of authentic cases, so that we are warranted in saying that rheumatic fever or rheumatic carditis, occurring during the first five years of life, is no longer a medical curiosity. Our thoughts and theories regarding the life history of rheumatic fever are constantly being revised and made to fit the facts, which are gradually being revealed to us by the painstaking and laborious work of the many observers and investigators who are trying to solve the various angles of this problem. We are now paying more and more attention to the early or juvenile form of the disease, whereas, heretofore, both primary and recurrent attacks formed the basis for the figures on the age incidence. In 1920, Rolly, of Germany, in a monograph on rheumatic fever, analyzed a series of 1,450 cases, and said that he found only 4 per cent of the attacks occurring during the first ten years of life, while 40 per cent occurred during the age of ten to twenty years, and 39 per cent occurred between twenty and thirty years of age.

Our present views regarding the age incidence of first attacks of rheumatic fever differ considerably from those which were popularly held as recently as even ten to fifteen years ago. This changing picture in our conception of rheumatism is highly significant. Even today there is an utter lack in the uniformity of the criteria used by the various men in arriving at a diagnosis of acute rheumatism—they do not agree regarding the earliest signs or symptoms. Not everyone is prepared to give the same answer to the question, "What is acute rheumatism?"

Instead of assigning the peak to the second and third decades, the incidence of first attacks is now believed to be at its highest during the first decade—especially between the ages of five and twelve years. Authentic cases are now being reported during the first year of life. In most of these cases it has

been found that these unfortunate infants were being nursed by mothers who were themselves suffering from an active phase of rheumatic fever. Richdorf and Griffith reported the case of an infant, six days old, with polyarthritis associated with acute rheumatic fever in the mother. Denzer reports three cases under two years of age, all of whom had a rather fulminating and fatal course.

Smith and Sutton found that 17 per cent of their cases, at Bellevue Hospital in New York City, gave a definite history of having been infected at five years of age or younger. Roth, Lingg and Whittemore, in analyzing their series of 488 cases of juvenile rheumatism, found that 26 per cent occurred during the first five years of life, and that in 78 per cent the infection definitely occurred before the tenth year. They found the mean age at onset to be eight years. They also emphasize very strongly the fact that in one-quarter of their cases the initial affections occurred during the pre-school age. Maynard Ladd, writing in 1925 in Abt's Pediatrics, says: ". . . it is rare in infancy and it is exceedingly uncommon under four or five years of age. Infantile scorbutis may be confused with it by inexperienced physicians." Still, in an analysis of 1,027 cases of rheumatic fever, he found none under two years and only eight under three years of age. Leonard Findlay, in his excellent monograph on "The Rheumatic Infection in Childhood", states that he himself has never seen a case before the third year, and of 457 cases of rheumatic carditis, the peak occurred (100 cases) at seven years of age. This is in entire accord with the opinion of Reginald Miller, who says: ". . . it is rare under two years and uncommon under five." Sutherland, however, claims never to have seen a case under four years of age.

Poynton appears to forecast a truer picture of the actual situation regarding the age incidence of first attacks of rheumatic fever than has heretofore been believed by most of the leading students and workers in this field of medicine, when he says: ". . . The incidence of rheumatism is now generally recognized to reach its maximum during school age, but further inquiry is needed into its frequency in the first five years of life." Poynton, without difficulty, recorded numerous examples of first attacks before the fifth year. He continues: "Doubtless the frequency of the disease increases after the fifth year, but it is evident that acute rheumatism in the very young is likely to be severe, and, if not fatal, to leave behind organic heart disease . . . the first symptoms may be obscure, and those who labor under the misapprehension that the disease is very rare at this period of life may easily overlook the insidious development of primary cardiac rheumatism."

The peak in the incidence of first attacks varies only slightly in the different series of reported cases. Coombs places it at about ten years of age, while Poynton finds his to be at seven. May Wilson found the average age, in her series of 413 cases, to be 7.3 years. McClean, reporting on 122 cases, found the age incidence to be distributed as follows:

At 3 years	9 cases
4 years	9 cases
5 years	18 cases
6 years	7 cases
7 years	7 cases
8 years	20 cases
9 years	9 cases
10 years	14 cases
11 years	12 cases
12 years	5 cases

In this series the peak is reached at five and again at eight years of age. The total admissions of children under twelve years of age to the Children's Hospital of Birmingham, Alabama, during the same period, was 4,852. Rustin McIntosh and Charles Wood were able to cull only twenty-four cases of children under three years of age from the records of the past twenty-five years at the Babies Hospital (Columbia—Presbyterian Medical Center in New York City) in which they were warranted in making a diagnosis of rheumatic infection. Ninety-six per cent of their cases showed evidence of rheumatic heart disease—clinically or pathologically. Autopsies were performed in six cases. They agree with Poynton when they conclude that "The incidence of rheumatic infection in subjects under three years of age is probably greater than is generally recognized."

McClean, in discussing the "Early Manifestation of Rheumatic Infections in Young Children", emphasizes the insidious onset, and mentions the following symptoms and signs, in order of their appearance: (1) easily fatigues, (2) children are pale, (3) poor appetite, (4) weight gain is not adequate, (5) slight pains in legs, feet or joints, (6) some stiffness of limbs or neck, (7) digestive disturbances—with paroxysmal abdominal pain, (8) change

in disposition (becoming irritable, nervous, peevish, easily frightened), (9) failure in mental concentration—begins to drop objects and have difficulty in writing, (10) slight muscle twitchings, (11) anemia. He believes that recurrent attacks may easily be precipitated by any of the following causes: (1) overwork, (2) fatigue, (3) too much excitement, (4) acute infections, (5) development of new foci of infection, (6) reinfection of old foci.

The earliest sign of any involvement of the heart itself by the rheumatic infection is, very often, the appearance of a soft systolic murmur at the apex. A short time later (several days or weeks) a mid-diastolic rumble occurs—which is considered definite evidence of involvement of the mitral valve.

In discussing the early diagnosis of rheumatic carditis, Copeman says: "Schlesinger has recently described an additional sign, based on the comparison between the sleeping pulse-rate and the normal pulse-rate in these cases, which seems to be useful, but which has not yet been reported on by independent observers."

Rothman and Leonard, in reporting four cases of cardiac failure in children under five years of age, bring out the point that there are still no specific criteria that one may use in making a diagnosis of rheumatic fever at this age. They also emphasize the fact that cardiac failure in young children presents some unusual features. They agree with Isaac Abt, who states that the earliest signs of cardiac failure in young children are most often (1) increased respiratory rate, (2) rapid engorgement of the liver.

Poynton, in an analysis of fifty-two cases of fatal rheumatic fever in children under five years of age, finds the following symptoms:

(1) definite heart disease ..... in 43 cases
(2) arthritis and arthritic pains ..... in 35 cases
(3) chorea ..... in 18 cases
(4) sore throats ..... in 10 cases
(5) nodules ..... in 8 cases

Poynton also states that, in reviewing 150 cases of fatal rheumatism under twelve years of age, 149 showed a definite valvular lesion at autopsy.

The close analogy that exists between the epidemiological behavior of rheumatic fever and that of tuberculosis has been mentioned, and emphasized repeatedly by many workers. After a rather complete review of the literature and a critical analysis of the subject, C. T. Burnett concludes with: ". . . rheumatic fever appears to be a communicable disease with about the same tendency to family infection as has tuberculosis. Presumably the prevention of upper respiratory tract infections will, in the future, materially reduce the incidence of rheumatic heart disease."

I agree entirely with Poynton when he says that ". . . those who have kept many records of rheumatic children must be struck by the fact that in a considerable number, definite attacks have been traced before the fifth year." In an analysis of one hundred consecutive cases of children under twelve years of age, he obtained evidence that the ". . . initial attack occurred before the fifth year in 12 per cent of the cases."

The great tendency of juvenile rheumatism to recurrence is clearly shown by Roth, Lingg and Whittemore. They also point out the fact that vulnerability is greatest during the three or four years after its onset. They therefore suggest, very strongly, that a child with this disease should be under very close observation, preferably in an institution for the first few years. In discussing the age at onset, these authors state, as their firm belief that, "Our observations of this special group leads to the assumption that acute rheumatism in children has its onset at a far earlier age than is generally implied in the literature on the subject . . . the incidence of first manifestations is highest during childhood . . . if in coming years our familiarity with the 'minor' symptoms and signs of juvenile rheumatism become greater, and if dependable diagnostic tests come to our aid, the disease may be found to have its onset among the earliest diseases of childhood."

Because this fact is apparently frequently overlooked, and because one might well emphasize once more the fact that the age incidence of first attacks of rheumatic fever is somewhat earlier than we have been in the *habit* of believing, and that it can, and that it does, occur at a much earlier age than most men have thought up to now, the following case is being reported:

Patient was a young white male child 32 months of age, acutely ill, obviously severely decompensated, who was sitting up in bed gasping for air, breathing very rapidly and having a marked respiratory grunt. The face and extremities were quite cyanotic, cold and rather clammy.

The child's history was: He was the fourth of four living children. The other three children ap-

peared to be quite sturdy and robust, despite the fact that both parents were thin, underweight, with an asthenic habitus, but appeared to be healthy enough. There was no history of any abortions, stillbirths or premature children.

The child was perfectly well until about six months before, when he had caught "cold" for the first time. He was taken to an osteopath, who treated him by various manipulations of the spine, etc., for four or five days. At the end of this time, the osteopath told the mother that the child now "had a cold throughout his entire system", and that he would have to notify the Board of Health, and that the child would need some more extensive manipulations. The mother noted that the child was beginning to grunt and to breathe very rapidly, and also that the glands in his neck were becoming quite large—something which she had never noticed before. His fever was also getting higher. She then became somewhat alarmed, and sent for a "regular" doctor. Even a cursory examination at this time revealed an acutely ill child, in marked distress and markedly cyanotic. The temperature was 105.4; the respirations were over 60 per minute and labored, and the pulse rate so rapid that it could hardly be counted. The tonsils were large, cryptic and infected, and there was a cervical lymphadenopathy. There was also evidence of an obvious broncho-pneumonia over quite a large area in both lung fields. No sign of any cardiac involvement was noted at this time. The abdomen was tympanitic, but no viscera (liver) were palpable. He was sent to the Orange Memorial Hospital at once, where the diagnosis of broncho-pneumonia was confirmed. The admitting diagnosis at this time (5/5/37) was: (1) bilateral otitis media, (2) pharyngitis, (3) broncho-pneumonia. On 5/9/37 it was noted that he was quite toxic. Hemolytic streptococci had been recovered from his throat. His temperature was 102, and his blood count was reported as follows: Hemoglobin 60 per cent; red blood cells 3,240,000; white blood cells 14,000; differential polys. 62 per cent, and lymphocytes 38 per cent. X-rays taken on admission showed a broncho-pneumonia chiefly in the lower left lobe; also a cardiac shadow that was suggestive of a congenital heart.

5/11/37.—Blood count had changed to: Hemoglobin 55 per cent; red blood cells 2,800,000; white blood cells 17,100; polys. 42 per cent, and lymphocytes 58 per cent. Sedimentation rate was 14 mm. in 30 minutes, and 35 mm. in 1 hour. Urine was negative. Child appeared to have gotten over the acute phase of his illness, but was listless and apathetic.

5/14/37.—Temperature was normal. Pulse, however, was somewhat irregular and quite high. Patient was again "toxic". X-rays suggest the possibility of a miliary tuberculosis. Mantoux was negative in all dilutions.

5/17/37.—Transfusion of 120 cc. of whole blood was given, by direct method, with a good reaction.

5/18/37.—Blood count now showed some improvement, as follows: Hemoglobin 68 per cent; red blood cells 3,780,000; white blood cells 9,100; differential polys. 54 per cent; lymphocytes 44 per cent; monocytes 2 per cent.

5/20/37.—Temperature still normal. Pulse still somewhat irregular (type of irregularity is not noted on the chart). X-rays still suggest the presence of a miliary tuberculosis. Broncho-pneumonia clearing quite nicely.

5/22/37.—Stomach washings negative for tuberculosis.

5/25/37.—Patient was discharged from the hospital with a final diagnosis of (1) nasopharyngitis, (2) broncho-pneumonia.

It was suggested that the child be given a high caloric, high vitamin diet. The child did fairly well at home for about a month, when he became acutely ill again. He now presented a different picture than he did at the beginning of his "first" illness, three or four weeks before. He had not voided for the preceding 24 hours. His respirations were labored and increased in frequency—about 50 per minute. He had now only the suggestion of a grunt; he was pale and not cyanotic as previously. His face appeared to be somewhat bloated. There was some pitting edema of both his lower extremities up to the middle of his thighs. His abdomen was tympanitic, but this time his liver filled most of his abdominal cavity, extending almost to his symphysis. There was no impairment to resonance over either lung field, but many moist and some bubbling rales could easily be heard over both lungs. The area of cardiac dullness was markedly enlarged. A loud double murmur was heard at the apex, and to a somewhat lesser extent over the entire precordium. This could be heard very distinctly in the left axilla and under the left scapula. No friction rub could be heard. There was a sug-

gestion of a diastolic murmur over the aortic area. The neck vessels pulsated violently. A very poor prognosis was given, but immediate hospitalization was advised.

He was admitted to the Homeopathic Hospital on June 2, 1937, where he was treated quite vigorously with limited fluid intake—to 500 cc. in 24 hours, ammonium chloride, 60 grains daily, intravenous salyrgan, codeine phosphate every three or four hours, and oxygen tent. He began to void almost at once. The liver receded, the edema of the extremities was markedly reduced and his breathing was much easier. This regime was discontinued in 48 hours, and on June 4, 1937, he was given digalen—2 cc. by hypodermic injection, three times daily for three days. He was also given 1 cc. of salyrgan intravenously. He reacted splendidly, and on June 9, 1937, the liver was only about one finger's breadth below the costal margin, the peripheral edema had all disappeared and his chest was clear of any moisture. He was quite lively, no longer listless, and very hungry. He continued to convalesce and improve very nicely, and walked out of the hospital on June 19, 1937. The area of cardiac dullness was still about 75 per cent of the chest diameter. Regarding the laboratory findings, it is noteworthy that the urine was always negative, that the sedimentation rate was never any higher than 11 millimeters in one hour. His hemoglobin varied between 59 and 62 per cent and he had about three and one-half million red blood cells per cubic millimeter. His mother was advised to take him to the shore for the summer, to limit his physical exertion, give him frequent sun baths, and to give him a high caloric, high vitamin, high iron diet. The mother carried out these instructions, and he did very well. On his return, in the Fall, examination revealed the fact that his cardiovascular system was compensating very well. His heart was still quite large. A loud double murmur was easily heard at the apex, transmitted to the entire precordium, to the left axilla and posteriorly under the left scapula.

On October 2, 1937, he caught "cold" again, and was readmitted to the Homeopathic Hospital on October 5th, with a diagnosis of (1) rheumatic pancarditis with decompensation, (2) broncho-pneumonia. He was acutely ill. His face was bloated, and there was pitting edema of his lower extremities up to the middle of his calves. His liver was at the level of his umbilicus. The area of cardiac dullness was still as large as before (75-80 per cent of the chest diameter). There was some impairment to resonance over the right middle lobe, and both lung fields were filled with many moist bubbling rales. There was no evidence of any free fluid in either pleural sac. A harsh to and fro murmur was heard at the apex. He had not voided for the preceding twenty-four hours. Fifty cc. of 25 per cent glucose and 1 cc. of salyrgan were given intravenously. Ammonium chloride, codeine phosphate, and phenobarbital were also given. He did not void as freely as he should have after this treatment. A transfusion of 60 cc. whole blood was given on October 8, 1937. He reacted very poorly, continued downhill quite rapidly, and died October 9, 1937—just one week after the onset of his latest recurrence.

Three days before he died, on October 6, 1937, the urine was reported as essentially negative, white blood cells as 15 thousand per cubic millimeter with 72 per cent polys., and 28 per cent lymphocytes; the hemoglobin was 52 per cent, and there were 3,400,000 red blood cells per cubic millimeter. The sedimentation rate had now gone up to 30 millimeters in one hour.

An autopsy was performed by Dr. Edward Fendrick. The essential postmortem findings were as follows:

Gross.—The body was that of a well nourished and well developed white boy. The veins of the neck and upper chest were congested. The abdomen was full. The lower extremities showed slight pitting edema.

Chest.—Both pleural cavities contained a few cc. of straw-colored clear fluid. Both lungs were collapsed. No adhesions were noted. Involving the lower parts of the upper apex of the right lung, the middle lobe, and the upper part of the lower lobe, there was a demarcated patchy area which was dark brown and airless. The left lung was crepitant throughout. On squeezing it a frothy, bloody fluid exuded.

Heart.—The pericardial sac contained excess fluid. The organ was markedly increased in size and weighed 240 grams. The left ventricle showed a wall which was much thicker than normal, and the cavity was enlarged. The heart muscle was deep red in color and tough in consistency. The free margin of the mitral valve showed slight thickening. The endocardium of the left auricle was somewhat cor-

rugated. Elsewhere the endocardium was free and clear. The right auricle and ventricle were dilated. The pulmonary and systemic aortae were free and clear.

Cause of Death.—Chronic rheumatic myocarditis with secondary broncho-pneumonia.

Microscopical.—Lungs.—The tissue about the small bronchi showed a round cell infiltration. The walls of the alveoli were thickened and fibrous, and the alveoli contained numerous desquamated cells of the "heart failure" type. Occasional alveoli contained granulocytes.

Heart.—Within the interstitial tissue of the heart muscle fibres were inflammatory lesions, consisting of round and plasma cells, with occasional giant cells—characteristic of Aschoff's bodies. Many of the lesions were seen in relation to the small branches of the coronaries.

Final Diagnosis:

(1) Congestion of kidneys
(2) Congestion and chronic interstitial pneumonitis
(3) Broncho-pneumonia
(4) Chronic interstitial rheumatic myocarditis
(5) Congestion and hyperplasia of spleen
(6) Congestion and central necrosis of liver

The most interesting feature of the pathologist's report is the *"chronic"* interstitial rheumatic myocarditis. The pathological picture of the lung tissue was very similar to that found in so-called "rheumatic pneumonia". Because of the chronic nature of the microscopic appearance of the heart muscle, I believe that we are warranted in assuming that the rheumatic infection was not of recent origin in this patient. He may very probably have had the infection for six to twelve months, or longer, before death occurred, so that the age at onset, in this patient, may very easily be put at one and a half to two years.

Birth History: Pregnancy was full term, and the baby weighed seven pounds and ten ounces at birth. Labor was not difficult, nor was it prolonged. Delivery was spontaneous.

Past History: Feeding history was, apparently, perfectly normal, rational and adequate. Baby was not breast fed. The diet was evidently well balanced throughout his entire life—especially with regard to the accessory food factors, etc. He had had none of the "diseases of childhood" previous to the onset of the present illness.

Family History: There was no known history of rheumatic fever in either parent or in any of the other three children.

Social History: It is significant that this was a "depression baby"—or, according to the newer terminology, a "recession baby". The family had been in moderately comfortable circumstances until about a year before the birth of this baby. They lived in a nice comfortable one-family house, and then quite suddenly—due to a number of financial reverses, they were forced to move to a cold "railroad flat" of three rooms. The mother, during this pregnancy, had to deny herself all but the bare necessities so far as food and clothing were concerned. After the baby's birth, he was, of course, brought up in this cold, damp house. Despite all this, he appeared quite strong, and even robust, up to the onset of the present illness, and, according to the history given by the mother, he never showed any of the usual symptoms often associated with the early manifestations of juvenile rheumatism—such as tonsillitis, sore throats, getting "cold" easily, pains in the limbs, easy fatigability, listlessness, paleness, etc.

Mother had frequent "squabbles" and "scenes" with her husband. When the child was six months of age the parents were separated, and did not become reconciled until about a year later. This child was accepted, but was not entirely welcomed or wanted. The home atmosphere was rather turbulent and not a happy one. The tension in the home was quite marked. All this wrangling, etc., started, coincidentally, at about the same time that the mother became pregnant with this child.

Comment: It is not only interesting but instructive, to speculate about the various elements that contributed to the development of rheumatic fever in this patient. An answer to the question, "What were the pre-disposing factors that allowed this infant to develop rheumatic heart disease?", would certainly be most enlightening, and might shed a ray of light on a relatively dark and unexplored corner of preventive medicine. It is refreshing and healthy to stop, every now and then, to take an inventory of, and to carefully scrutinize all of the "old" and the more recently acquired facts about any disease—to add and subtract all of these facts, and to see just what our sum total of knowledge really is, and, using this as a guide, to carry on from there. Pope once said, "Be not the first by

whom the new are tried, nor yet the last to lay the old aside", which is certainly a very safe rule to follow, but certainly we should have an open mind and be receptive to "the new".

The Rt. Hon. Lord Dawson of Penn, in a talk entitled "Environmental Factors in Rheumatic Disease", says, ". . . It is environment which holds the larger responsibility—defective methods of housing and domestic living; lack of light and air and opportunities for recreation. . . . We are only gradually learning what the value of recreation is, and how it should be applied and used." "I am convinced", says Harold Bachamann, "that environment is an important factor; whether it be poverty, dampness, poor nutrition or lowered resistance." Further along, he says, "It is infection which excites the heart failure, so distressing in childhood, and not exertion." C. Wilfred Vining, in writing about the "Pre-Rheumatic Child", states that "Rheumatism of childhood is primarily a disease based upon a nutritional disturbance brought about by a prolonged dietetic deficiency either in vitamin B, or a deficiency in protein in conjunction with a relative excess of carbohydrate or possibly to both these factors . . . prevention lies first and foremost in the provision of a well-balanced diet from infancy onward."

A. Dingwell Fordyce, in discussing the "Predisposing Factors in Rheumatic Infection in Childhood" states ". . . an important predisposing factor toward rheumatic infection in childhood is *instability of the nervous system*" (italics mine). When our patient made his debut into this world, the stage was all set; he was handicapped right from the start (and even for a year before he was born) —poverty, dampness, poor nutrition and a more or less uncertain food supply. Careful scrutiny of the histories of any series of cases of rheumatic fever will undoubtedly bear out the contentions of Jacobi, Poynton, Roth and other leading investigators that the earliest manifestations of rheumatic fever can very often be found before the children are five years of age.

In addition to all of those factors, I believe that we must also take cognizance of the work of Homer Swift and his colleagues, at the Rockefeller Institute, who believe that rheumatic fever is a manifestation of hypersensitiveness to streptococci, resulting from repeated low grade infections in the body.

SUMMARY

A case is reported of rheumatic fever in an infant, together with autopsy findings. A number of predisposing factors that may probably have played an important part of this patient's fatal rheumatic infection are discussed. The point is also brought out that first attacks of juvenile rheumatic fever occur at a much earlier age, and with greater frequency than we have been in the *habit* of believing.

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Schering Award Competition.

"The Clinical Use of Androgens in the Female" has been selected as the subject for the 1947 "Schering Award" competition among medical students in the United States and Canada, according to Dr. John N. McDonnell, Director of Domestic Sales and Promotion for Schering Corporation, Bloomfield, N. J. As in previous years, cash prizes of $500.00, $300.00 and $200.00 will be given for the best manuscripts received on this subject. Three judges prominent in endocrinology will select the winning entries. Dr. Norman L. Heminway, head of the Schering Medical Service Department, is chairman of the Schering Award Committee and in charge of the competition.

The "Schering Awards" are offered annually in competition to stimulate the acquisition of further knowledge of endocrinology by medical students, as a contribution to Medicine by Schering. Many students from almost a hundred medical colleges will submit their manuscripts for this year's Schering Award Contest which closes July 31, 1947.

DISSIMULATION IN SCHIZOPHRENIC PSYCHOSES*

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As stated in Proverbs[1] the way of the fool is right in his own eyes; fools despise wisdom and instruction,[2] and a fool has no delight in understanding.[3] However, as Proverbs further state: even a fool when he holdeth his peace is considered wise, and he that shutteth his lips is esteemed a man of understanding.[4] The fools are accordingly advised to keep their mouths shut, especially as far as their ideas which are considered foolish by the society are concerned; it is an advice for the fool to dissimulate, to hide his foolish ideas. Psychotherapy in the form of dissimulation is accordingly very old and it has been used as a method of treatment of psychoses repeatedly. Both the Tikkun Pgam of the old Cabbalists and the religious exercises of Ignatius Loyola appear to be forms of mental treatment by dissimulation. A survey of older ideas on this subject is given in Burton's Anatomy of Melancholy.[5] Nowadays it was the Vienna school of Stransky and Kogerer[6] which has developed a new method of treatment of schizophrenia by dissimulation.

The following case reports shall illustrate the spontaneous tendency for dissimulation as observed in both abortive and developed cases of schizophrenic psychoses.

Case 1.—It was a 55-year old white woman of pyknic constitution with a face resembling a full moon and with rosacea on both cheeks. She was lying quietly in bed and her full moon face did not show any signs of emotion when the examiner appeared. Neither did she change her comfortable position in bed nor did her face exhibit any emotional display most of the time during the examination. Nevertheless, there was a great deal of frozen suspicion in her facial expression, and an unmistakable tendency to mask this by a matter of fact expression. (Why here?) "They did not explain it to me. (This is a hospital for mental diseases.) She appears trying to turn her face towards the examiner. With stiff astonishment she says: "Is it? I see . . . I guess it is . . ." (Why here?) "I do not know. I guess I'll get well" (?) "a good while ago I was in the Lakeland Hospital for one year and four months. They confined me there." "Through confinement." This is incoherent. (Have you been insane?) "Irish people are not crazy!" After a while, however: "Do you think I'll get well and go home?" She denies having called her neighbors bad names: "I am a Catholic lady!" (They say you did.) "Do they? Is not that awful?!" She admits having heard God's voice. According to the commitment papers, she had ideas of persecution and kept on aggravating her neighbors 2 years ago, but she promised to be good. This promise she was able to keep until 2 weeks before her commitment to the hospital. She then accused the neighbors of calling her bad names and threatened to kill them with a club.

Impression: This is a psychosis with auditory hallucinations and both persecutory and religious delusions. The diagnosis of a paranoid condition was made, and this examiner believed it to be a case of schizophrenia, paranoid type, which was modified by the patient's ability to dissimulate her psychotic symptoms for many years. She was trying to be good.

The mental activity of the complexes in a schizophrenic is so forceful that, as a rule, these complexes use to break the thin layer of reality consciousness covering them and then the psychosis becomes manifest in spite of all attempts to dissimulate it, as shown in the following case:

Case 2.—L. G. B., 63 years old, single, farmer, Protestant. This is his ninth admission to this hospital, and it appears to be the tenth attack of the psychosis. He had an attack of violent excitement before his commitment to the hospital; however, when in the hospital he quieted down, appeared depressed and worried and cooperated very well. He was very well oriented. On the same day he became extremely noisy, restless, disturbed and resistive, and he had to be put in restraint. During the physical examination performed on the next day the patient was very restless, appeared considerably confused, and he kept on gesticulating in a queer way with both his hands and striking the wall with his fists, apparently in order to emphasize in this

*From the Longview State Hospital, Cincinnati, Ohio.

way his utterings. These, however, were greatly confused, fragmentary and without any connection. This inner restlessness, excitement and confusion continued for 3 days and afterwards he was quiet. During the mental examination the patient was quiet and cooperated very well. No mannerisms or catatonic attitudes were noted. His face expressed a great deal of embarrassment and a lot of guilt. There were dark rings around his eyes and from time to time a marked grimacing could be noted. His face was always directed towards the examiner. He stated that he never married in his life nor did he have any sexual experiences whatsoever; that there is nothing wrong with his mind. (Why here?) "I guess I must have been afraid of something." He never was playing with himself; he had a phymosis and at the age of 25 he was circumcised. This phymosis has apparently determined the psychogenic superstructure of his psychosis. He states: "I never want something like that (masturbation). I never wanted to get something; I do not want anybody to blame something on me. Before the operation it was not possible. When I was a small boy I would hear people say that he who plays with himself comes always to the 'bug' house" . . . I was always very careful . . . I was afraid . . . I was afraid that if I would get arrested I would not be able to explain myself . . . I would rather wait and hold the water when it was too bad then to have an officer come and find me when I was letting water . . . If they would find a man doing something like that in front of a lady that would be a disgrace forever. When I was working in a place where a lady was working I would not want to go into that place where the lady was working. I did not want to ask her anything, but I did not want to use it at that time. I would not feel like using it at that time; my mind was somewhere else. I wanted to be perfect if I could; and I knew I could if I would not say anything . . . I would rather go to a place where I could get one . . . I went down to the basement of that place . . . I knew there was one there. One time I was reported to the woman in charge of the toilet . . . I would go miles off my road to get a toilet". (How did you happen to come to the bug house?) "Before the first admission I have been working in the station; I was a fireman in the custom house. That was the first place where I got it. It has affected my eyes . . . When I was in school I always went to my home place to use the toilet. You could get a thrashing or something like that if you were reported that you were standing around in the toilet. I never wanted anyone and I never wanted to stand. I always looked in a different direction. I never wanted that one should know that I would go in a place like that . . . My eyes always jerk since that time. I felt miserable from it . . . I felt awfully miserable. The eyes could make you believe that you are losing your sight . . . that you are losing your head . . . your brain . . . That was when I was working in the custom house during Cleveland's second term. I knew everything that was going on and I was trying to save myself but I could not do it. I felt bad all the time but I did not tell it to anybody. I was afraid they would say: 'You have to go to the bug house' . . . My brother saw that . . . that something was going on with me, and he said I ought to have a treatment; he sent me to the state hospital. It must have been going on for a year before I came to the hospital. I would not complain to anybody. The only thing: I would not answer. I never would laugh and would not talk. I had only a few words to say, would say 'yes' or 'no'. I saw it was funny but I could not do anything against it. I would try to do the best . . . When you are in a condition like that you always want to have friends. When you have friends . . . when they say a few words to you—that makes you feel different! Money would be of no account when you have that feeling!" (What happened before the last admission?) "I could not sit still on account of my piles. I would pace around in my room. I did not want to do anything wrong when I came here. I did not want to hurt anybody, did I?" Tears appeared in his eyes. "When I came here I was absent-minded and I lost my memory." In accordance with Bleuler's classification, the examiner believed it to be a case of abortive schizophrenia.

This case reveals the mental tortures a schizophrenic patient undergoes when he tries to adapt himself to the reality by dissimulation. Nevertheless, by dissimulating his psychotic symptoms, by trying to adapt himself to the reality, this patient, like many other similar cases seen by me, was able to stay out of the "bug house" most of his life, and no appreciable amount of schizophrenic deteriora-

tion could be noted in this case upon his ninth admission to the hospital. Dissimulation accordingly appears to be a purposeful phenomenon, especially in schizophrenic psychoses, and should be encouraged as a method of psychotherapy. However, no attempt should be made to encourage the spontaneous dissimulation which used to be observed in cases of manic-depressive psychosis, depressive state (melancholia), and frequently ends in a suicide of the patient.

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Penicillin Therapy in Scarlet Fever.

Writing in the March 8 issue of *The Journal of the American Medical Association*, Harold L. Hirsh, M.D.; Georgine Rotman-Kavka, M.D.; Harry F. Dowling, M.D.; and Lewis K. Sweet, M.D., who are from the George Washington University School of Medicine, Washington, D. C., report that they used penicillin in the treatment of 86 patients with scarlet fever and found that:

Penicillin brought a prompt fall in temperature, decreased toxicity and practically eliminated the danger of patients carrying the disease and infecting others.

Penicillin was more effective than scarlet fever antitoxin in the prevention of complications.

Throat cultures were free of scarlet fever germs within 48 hours after penicillin treatment was started.

Use of penicillin eliminated the frequent occurrence of serum sickness following the use of antitoxin.

In another *Journal* article, Drs. Archibald L. Hoyne and Rowine Hayes Brown, who are from the Municipal Contagious Disease Hospital of the Chicago Health Department, relate how they used penicillin exclusively on 116 scarlet fever patients during the last 14 months. They found that:

Penicillin is equally as good a therapeutic agent for scarlet fever as convalescent scarlet fever serum.

Penicillin is superior to sulfonamide drugs as a therapeutic measure for scarlet fever.

The big advantage which the penicillin-treated patients possessed was that fewer complications followed its use than occurred with other forms of treatment.

Winthrop Opens New "Dustless" Building.

A new four-story brick and glass, windowless, germ and dust-proof laboratory plant designed to be run under constant scientific control for the preparation of injectible medicines in ampuls has been opened at Rensselaer, N. Y., by the Winthrop Chemical Company, Inc. Engineers of the Austin Company, who built it starting in May 1945, characterized the completed job as a "scientific utopia" and "one of the most complex and intricate examples of controlled-conditions buildings to be seen anywhere".

Most unusual feature is the unique system of dedusting passageways in the basement. Before entering the main building where the medicines are made, all employees and visitors must walk through one of two narrow passages lined with double dedusting blowing and suction units designed to remove lint and dust from their clothing.

The preparations are made in 35 individual, isolated, germ-proofed, air-conditioned and controlled compartment laboratory workrooms. Every appropriate scientific development has been adopted to provide as nearly perfect conditions as possible for the production of medicines in injectible form. The building creates its own weather through modern heating and air-conditioning systems.

DO BONY SPURS CAUSE PAIN?

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This is an important question. Medical literature seems to be arrayed on the affirmative side. We believe the negative side is nearer the truth, and the present attitude of the profession is an impediment to progress. If this discussion adds to the enlightenment of the subject, it will be a forward step.

If the bony spur does not cause pain in osteoarthritis, what is the origin of the pain? We believe that it originates in an inflamed muscle, and unless there is a myositis present, there is no pain.

The disease may progress for some time without pain, but as soon as the muscles are involved, pain becomes the dominant symptom. Therefore, in a case of osteoarthritis with pain, a thorough palpation of the muscles should be made to find the seat of the inflammation; and when this is found, proper physical therapy should be applied.

It is customary at present, if a patient presents himself with back pain and the x-ray shows one or more spurs on the spine, to prescribe a brace or surgical corset and turn him loose with a diagnosis of osteoarthritis. This results in great mental trauma and leaves the pathology untouched and the pain only modified. If the back muscles were carefully palpated in these cases, a chronic myositis would be found, which would yield to proper physical treatment.

In painful and swollen knees showing spurs on x-ray examination, the spurs are quickly incriminated, whereas the real culprit is the overlying muscular inflammation.

It is the recurrent attacks of myositis with ever increasing exudates and induration that cause the pain in this disease, the bone playing a silent role until late in the disease when bone hypertrophy has become dominant. It is only then that the muscles take a subsidiary part.

To exemplify: A man, age 72, suffered with his left shoulder, left leg, and especially his back. He was quite lame, walked with a cane, and wore a brace over the lumbar spine. He had been seen by several physicians. The x-ray showed one or more spurs on the spine; a diagnosis of osteoarthritis was made, and a brace over the lumbar spine was prescribed. On examination, a chronic myositis was found involving the left deltoid and the muscles around the left pelvis and the upper part of left thigh, as well as the right lumbar region. After four weeks of physical therapy, he was free from pain and had discarded his brace and cane. At this time he was walking two to three miles daily.

A woman in the sixth decade of life had been suffering with pain in the lower back over a long period. She was examined at a large clinic, the x-ray showing spurs on the spine; the diagnosis of osteoarthritis was made and a surgical corset prescribed. In this case, a chronic myositis of the lumbar muscles was found. This patient was entirely relieved of pain after four weeks of physical treatment.

A woman, age 80, with painful and swollen knees, said her physician had reported a spur as the cause of the trouble and advised rest for the knee. This case showed a myositis of the muscles around the knee, which myositis yielded to massage in three weeks.

From the practical standpoint, these were cases of myositis and should have been so diagnosed. The spurs were not causing trouble and probably never would. If proper search had been made, the muscles—not the insignificant spurs—would have held the center of the stage. The pathology which is reversible is in the muscle, and active physical therapy is indicated. Immobilization in these cases is harmful.

PUBLIC HEALTH

L. J. ROPER, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for February, 1947, as compared with the same month in 1946, and for the period of January through February, 1947, compared with the same period in 1946, follows:

	Feb. 1947	Feb. 1946	Jan.-Feb. 1947	Jan.-Feb. 1946
Typhoid and Paratyphoid	7	4	10	11
Diarrhea and Dysentery	150	116	301	221
Measles	893	953	1,389	1,493
Scarlet Fever	143	262	306	528
Diphtheria	27	40	64	103
Poliomyelitis	5	0	9	1
Meningitis	12	24	22	60
Undulant Fever	2	5	2	7
Rocky Mountain Spotted Fever	1	0	1	0
Tularemia	8	4	24	21

SMALLPOX VACCINATION

Many inquiries reach the State and local health departments relative to approved technique in smallpox vaccination. In response to these questions the following recommendations are presented with the additional assurance of essential approval by the American Public Health Association and of the United States Public Health Service:

RECOMMENDATIONS

1. Vaccinate at the age of eight to ten months, either alone or in combination with the second diphtheria and tetanus injections. At this age reaction or complication seldom occur and the vaccination scar is minimal.
2. The approved site of vaccination is that skin area immediately over the deltoid insertion and usually that of the left arm. Clinical difficulties are more frequently encountered when other sites are chosen.
3. Smallpox vaccine must be stored and transported in the frozen state. Efficient vaccination is only possible under the above conditions, removing it from refrigeration a short time before use. The biological should not be used beyond its expiratory date.
4. Acetone is preferred for antiseptic application to the skin area to be vaccinated. Alcohol, iodine, phenol and other antiseptics will frequently destroy the vaccine virus.
5. The multiple pressure method of vaccination is preferred to all other. With proper technique the possibilities of reactions and complications are minimal and the cosmetic result more satisfactory.
6. Loose fitting clothing of light smooth material is recommended during the active period of vaccination. Constriction and irritation are likely to lead to clinical difficulties.
7. The application of shields and dressings to the vaccinated area is condemned, as their use predisposes to severe reactions and to complications. Exception is made in cases with profuse drainage, in which instances dressings loosely applied with adhesive strips parallel to the long axis of the arm may be used.
8. If vaccination is withheld beyond the first year, unless smallpox exposure occurs, delay until the sixth year is advised to prevent accident. Similarly treatment during the summer months predisposes to secondary infection and other complications and should be avoided if possible.

THE MULTIPLE PRESSURE METHOD OF SMALLPOX VACCINATION

1. Moisten absorbent cotton with acetone and apply lightly to the deltoid insertion area of the left arm and allow acetone to dry.
2. Using aseptic technique, apply smallpox vaccine to this area.
3. Hold a sterile needle between the thumb and index fingers at about fifteen degrees to the transverse axis of the patient's arm. Tap an eighth inch area through the vaccine with the side and tip of the needle, using a down and forward stroke. Avoid bleeding as this tends to increase reaction. Within five minutes a small pink papule should appear at the site of vaccination.
4. Wipe off excess vaccine with sterile absorbent cotton.
5. Do not use a shield or dressing.

MEDICAL SOCIETY OF VIRGINIA

PUBLIC RELATIONS

Some Activities.

Further consideration of policies and procedures of public relations were discussed at the Public Relations Committee meeting Friday night, February 28, at Rueger's Hotel. Attending the meeting were: Dr. J. M. Emmett, Dr. H. B Mulholland, Dr. A. L. Carson, Jr., for Dr. L. J. Roper, and Mr. Henry S. Johnson, Public Relations Director.

Attention was directed to the absolute necessity of a complete organization within the Medical Society before a successful Public Relations program could be expected. This, of course, refers to a District Councilor and Public Relations Representative for every component medical society, and a doctor in a similar capacity from every county in the state to serve under the direction of the Councilors for the respective districts. It was felt that the members of the District Council, in counties where no medical society existed, could do a great deal for Public Relations, and the medical profession of Virginia.

Since the topic for the high school debate, sponsored by the Virginia Literary and Athletic League, for this year is "Socialized Medicine", furnishing them with helpful materials was deemed timely.

Every possible effort is being exercised to set up and arrange for a radio program in several stations in Virginia. If this program, "Tell Me Doctor", can be worked out and scheduled with the various radio stations, it is hoped that it will be a five-minute transcription, perhaps five days a week (probably for a 13-week period). Cooperation and active assistance from component medical societies is essential in our final arrangements for this program with radio stations.

The matter of determining whether radio stations will accept "Tell Me Doctor" as a public service or if the time has to be purchased, and if so, the matter of finding sponsors who will pay for it, are some of the necessary problems we are working on.

A quiz on health and medical topics has been prepared for newspapers in the state. There appears to be considerable preference for this manner of presenting timely items to the public over the usual health column. As with the radio, the careful preparation of the material, with respect to authenticity, and the approval of our medical Censorship Committee, are essential. In addition, the problem of arranging for the publication of quizes constitutes a job of some proportions. We may suffer some disappointment in our efforts to work this out with the daily papers and find that we shall have to rely almost completely on weeklies. There is reasonable hope that a definite announcement of the beginning of this series can be made soon.

A barrage of requests have come to the Public Relations Office for a complete and up-to-date list of all of the doctors (and their location) in the state. Under the guidance of the Public Relations Committee, an attempt is being made to develop such a list from four sources. Local medical societies can be of great assistance in a final check before the list goes to print.

A more concise analysis of currently proposed legislation is another objective of the Public Relations Department. Two types have been suggested: the essay and the question and answer. If this can be done, it is believed it could very well serve as a supplement to information sent out by American Medical Association headquarters and the data supplied through the office of Dr. Joseph S. Lawrence, Washington, D. C.

The Director of Public Relations is continuing his efforts to meet every request to appear before local medical societies, and welcomes every opportunity to meet with any medical society or lay group that may be scheduled.

Outline of the Results of the Public Relations Committee Meeting, January 7, 1947.

I. CONTACT WITH MEDICAL SOCIETIES IN THE STATE

A. Through the Councilor find out what county and component societies there are in each district.

B. Request the Councilors to give us the names of the members of their respective District Councils. (We should inform all members of the District Council of their appointment if they are not aware of this.) We should also furnish information and materials on the December 19 meeting to each member of the Council and the District Council who do not have this.

C. We should remind each Councilor to complete his list of members of the District Council within his district.

D. These members of the District Council should be regarded, at least for the present, as those upon whom we should depend for assistance in public relations work within the Component Societies.

E. This representative should be furnished a kit of materials to distribute in his society. He can let the main office know what materials he wants and the quantity. ("Check and Double Check" and "Voluntary Sickness Insurance vs. Compulsory Insurance" were considered valuable.)

F. The Public Relations Committee has instructed the Director of Public Relations to urge each Councilor to call a meeting of his District Council. It was also the thinking of the Public Relations Committee that the Director of Public Relations should plan to meet with all such conferences, if possible. It was recommended that the Councilors be requested to send in to the Director of Public Relations the dates of these conferences, and that Councilors be advised that the Public Relations Committee was requesting the Director

of Public Relations to attend the above mentioned meetings.

II. RADIO

A. The Public Relations Committee agreed we should try to secure the services of Mrs. Turnage for a period of sixty days to act as Radio Consultant on a part-time basis at a salary of one hundred dollars ($100) a month. It appears to be the general agreement that at the end of forty-five days of the above mentioned period we should be in a position to decide whether or not we wish to continue this arrangement with Mrs. Turnage.

1. It was the committee's opinion that Mrs. Turnage should prepare scripts for fifteen-minute transcriptions on several subjects, such as:
   a. High school debate subject of the year
   b. Prepayment medical care plans, etc.
2. And, in addition, submit script of approximately five-minute periods on appropriate subjects.

B. It was suggested that we attempt to make this material so valuable and attractive that the radio stations would be glad to schedule it as a public service. In the event we were unable to do this, it was thought best to try to get a state-wide sponsor for all ten stations, and if this failed our next effort should be to get local sponsors.

C. The Committee felt that we should determine if five-minute transcriptions used by the Michigan Medical Association were available to us, assuming, of course, that these were in each particular, applicable to Virginia. They favored the five-minute program (daily), if this could be arranged, over the fifteen-minute programs put on less frequently.

D. In order to facilitate our efforts to get medical censorship for our radio, press, literature and any publications, the Committee directed that the following Richmond doctors be requested to serve on the Board of Censors: Dr. Wyndham B. Blanton, Dr. J. Morrison Hutcheson, Dr. L. J. Roper, Dr. M. Pierce Rucker, and Dr. Carrington Williams. It was ordered that these men be contacted and requested to serve in this capacity. The Committee was quite willing to assume the responsibility for the content of materials going out of the Public Relations office, but felt that these, after put in final form, should be subject to close medical censorship.

III. NEWS RELEASES

A. The belief was expressed that news releases could usually well be centered around events and medical happenings of news value. It was suggested that we try to get news items on meetings of medical societies.

B. An article on the growth and overall coverage of medical care plans written in an interesting feature story manner was suggested for possible submission to newspapers and magazines. (The Virginia Education Association has already requested this as regards teachers.)

1. This article might include information as to the workings of the different plans with new and future developments.
2. It might also include information on how the population can get the plans and what the plan will do for them.

IV. ORGANIZATIONS, AGENCIES, AND INTERESTS THE DIRECTOR SHOULD CONTACT

A. It was suggested that a second letter should be sent to all medical societies reminding them that the Director of Public Relations is available to speak with them.

B. The importance of contacts with lay groups by the Director for information about the medical profession's activities was brought out and the following suggestions were made:

1. The Director was requested to contact public welfare groups, who seem to be most hostile to our present system of medical care; also Home Economics groups, farm bureaus, etc.
2. The desirability of having public relations men and other representatives from various organizations and interests outside the medical profession sit in with medical groups more often was expressed.
3. It was suggested that the Public Relations Director might accept invitations to talk with groups of medical students, nurses, dentists, pharmacists, etc.
4. Contacts with the above mentioned groups would serve as an excellent means of distributing literature received in great quantities.

C. It was agreed that notices be placed in the VIRGINIA MEDICAL MONTHLY as a reminder of the availability of the Director of Public Relations to any component or local medical society, as well as any lay group.

V. THREE MAJOR PROJECTS ARE:

A. Radio, discussed above.

B. Press, discussed above.

C. Appearances before lay groups

1. It was recommended that a meeting be scheduled at least once a year by each medical society centered about the problems of the medical societies, and the solution of these. It was pointed out that if local medical societies find difficulty in providing a speaker, the Office of Public Relations, with the Committee's help, would be glad to assist, if requested.
2. The belief was expressed that speakers provided should be men interested in and sure of their subject to serve without compensation, rather than the employment of outstanding orators.

VENEREAL DISEASE CONTROL COMMITTEE

The Venereal Disease Control Committee of the Medical Society of Virginia held a meeting at the Commonwealth Club, Richmond, on March 6th, with the following present: Dr. W. W. S. Butler, *chairman,* and Drs. E. M. Holmes, R. D. Kimbrough, James W. Love, D. S. Garner and E. E. Barksdale. Dr. D. C. Smith was the only member of the Committee unable to attend. The following report has been submitted as a result of this meeting:

PART I

The Committee discussed the recent laboratory evaluation study conducted by the State Health Department under the terms of the Virginia Premarital Examination Act. As sixteen laboratories had failed, the Committee recommended that these laboratories be given temporary approval under the following terms:

1. That Mrs. Elsie Foxhall, chief of the serology section of the State Health Department Laboratory, visit and laboratories that failed, to check their equipment. and test procedures.
2. That technicians from the failing laboratories come to the State Health Department for one week's observation and inspection in serodiagnostic methods.
3. That these laboratories be sent 25 specimens, 10 non-syphilitics and 15 syphilitics for evaluation.

PART II

The Committee discussed the advisability of recommending ambulant treatment with penicillin, oil and beeswax for syphilis and recommended that for the present and possibly subject to change at a later date that early lesion syphilis (primary, secondary and mucocutaneous relapse) be treated as follows: In public clinics located in large cities, the patients will be given 600,000 units a day for 5 days. In private practice lesion syphilis will he treated with one of the two following schedules:

1. Six hundred thousand units of penicillin, oil and beeswax a day for 10 days or 300,000 units of penicillin, oil and beeswax, a day for 18 or 20 days
2. That non-lesion syphilis (latent) be treated with 600,000 units of penicillin, oil and beeswax daily for 10 days.

In the management of lesion syphilis (primary and secondary) and non-lesion syphilis it is recommended that the State Health Department furnish POB to private physicians free of charge for the treatment of indigent and submarginal income patients. Further, it is recommended that this drug only be released upon the receipt of a morbidity report on which the physician lists the patient's complete name, color, sex, age and address, and signifies his willingness to have the patient interviewed for sexual contacts. This recommendation, of course, is contingent upon the approval of the budget committee of the State Health Department.

For the treatment of late syphilis, the following schedule was recommended; 8,000,000 units of POB given in 10 to 20 doses; in the management of individuals in the cardiovascular age group to avoid severe reactions, the patient should either be initiated into treatment with bismuth subsalicylate given intra-muscularly twice a week for 4 weeks or initiated with a fractional dose of 1,000 Oxford units of aqueous penicillin sodium every two hours. The committee did not recommend free penicillin for late syphilis at this time.

The committee did not recommend the concomitant use of arsenic and bismuth but stated that they felt that arsenicals and hismuth should be reserved for treatment failure and if administered should be given under the 26 weekly modified intensive arsenic-bismuth therapy schedule. The committee further stated that with our present knowledge it is believed that in the treatment of early lesion and non-lesion syphilis, penicillin should be given a thorough trial first because it is safe and quick. The patient should be observed and followed up carefully for evidence of failure of cure. The physician after failures can, if necessary, resort to arsenic-bismuth and fever therapy. The exceptions to straight penicillin therapy without arsenic-bismuth and fever therapy are interstitial keratitis, optic atrophy and possibly some of the other varieties of neuro-syphilis.

The Committee further recommended that all penicillin treated patients be followed up on the following schedule: Monthly physical inspection examinations and quantitative serologic tests for the first year. Inspection and quantitative tests on the 15th month, 18th month, 24th month and annually for the next three years. It was also recommended that all penicillin treated patients be given a spinal fluid examination within three to six months after completion of treatment.

PART III

The Committee recommended that the State Health Department survey the two rapid treatment centers, one located in Richmond and the other in Norfolk, for the purpose of deciding—first, whether both of these institutions should be kept open after July 1, 1947, and secondly, whether the State should take these institutions over from the Federal Government. It was the opinion of the Committee that rapid treatment under hospitalization is an essential in the State control program to care for patients from the rural areas, as it is believed that ambulant treatment would not he practical without prohibitive cost in patient follow-up in such areas. It was further recommended that the medical students from the Medical College of Virginia and the University of Virginia, visit the center or centers if both are kept open for observation in the clinical management of syphilis under hospitalization.

REPORT OF DELEGATES TO AMERICAN MEDICAL ASSOCIATION

In accordance with action taken at the San Francisco Session of the American Medical Association, the House of Delegates held its first interim meeting at the headquarters of the Association in Chicago, December 9 to 11, 1946. Attendance was most gratifying, and a large volume of business was transacted.

Of primary importance was consideration of the public relations of the Association, and this centered around the Rich report which had been presented in part at the previous meeting of the House. Copies of the complete report were furnished all delegates and, after ample time for individual study, the report was laid before the House, acting as a committee of the whole for final disposition. Most of the recommendations embodied in the report were adopted with or without modification. These attempt to further systematize the work of the Association and to clarify the objectives and responsibilities of the various councils and bureaus, and to give greater emphasis to public relations. Certain recommendations previously adopted had already been put into effect. There is in the headquarters of the Association a division of public relations under an executive assistant to the General Manager, which will have charge of all public relations activities of the Association. Action was deferred on a recommendation concerning the relationship of the American Medical Association and the National Physicians Committee, and a special committee was authorized for the purpose of giving this subject further study. At the same time, the House expressed its unwillingness to go as far in initiating legislation as was recommended in the Rich report.

As scheduled, a report was received from a committee appointed at the previous regular session on revision of the constitution and by-laws. This brought discussion and suggestions from various delegates but no final action. The committee was instructed to continue its study and report at the next general session. One significant change in the by-laws was adopted, deleting from Chapter IV, Section 1, on Nominations the last sentence: "No member of the House of Delegates nor general officer of the Association shall be eligible for election to the office of President-elect or Vice-President." This provision has been circumvented by resignation a number of times in the past and seems unnecessary.

The Council on Medical Service reported a steady increase in the number of plans for prepayment medical care, and in enrollment in these plans throughout the country. As of November 1, 1946, the seal of acceptance had been granted to twenty-seven Medical Society approved plans. Developed only in the past few years, it is expected that enrollment in these plans will reach five million early this year. The Council continues active in assisting localities in the various phases of developing and publicizing this undertaking.

The Council on Medical Service wishes to impress on the State Medical Society the necessity of preparing a plan of cooperation for putting into effect the provisions of the Hill-Burton Bill. The Council is preparing a statement of principles to be used as a guide to such cooperation and a set of minimal standards for diagnostic clinic facilities. These suggested principles may be found on page 1014, volume 132, December 21, 1946 issue of the *Journal* of the American Medical Association.

A resolution was offered by Dr. Hammer, Delegate from Indiana, requesting that the American Medical Association sponsor a National Conference of officers of County Medical Societies. This resolution was favorably received and the American Medical Association is sponsoring such a meeting, which is to be held in Atlantic City on June 9th, and to which all officers of all state medical societies are to be invited. This should be an important meeting.

There was considerable discussion with reference to the bill to be introduced by Senator Taft in Congress after the first of the year. It was understood that such a bill would provide for grants in aid to States for medical care of the indigent. Conferences between members of the medical profession and Senator Taft were to take place sometime during the holidays. It was urged that all physicians familiarize themselves with the important bills being introduced which would have a bearing on the practice of medicine.

An interesting address by Admiral Boone dealt with the medical care of miners. Admiral Boone heads a government commission to study the hospital and medical facilities, medical treatment, sanitary and housing conditions in the coal mining areas. The purpose of this survey is to determine the character and scope of improvements which should be made to provide the mine workers of the nation with medical, housing and sanitary facilities conforming to recognized American standards.

A resolution which would permit members of the permanent corps of the Veterans Administration to apply for fellowship in the American Medical Association was introduced and received favorable consideration. As this would involve change in the constitution, no action could be taken until the next meeting of the Association.

Several resolutions concerning the practices of the various specialty boards were considered and discussed but no specific action taken. It was recommended that certification by a board be not held a requirement for staff membership in approved hospitals. It was also recommended that hospitals encourage the establishment of general practitioner services and that the existence of such services shall not prevent approval of hospitals for the training of internes and residents.

A resolution condemning the political activity of the

Surgeon General of the Public Health Service evoked rather warm discussion. It was charged that this officer in a specific directive to members of his corps had supported the cause of socialized medicine. The House of Delegates went on record as expressing complete disapproval of this conduct of the Surgeon General.

In the addresses and remarks of officers and delegates, a feeling of optimism over the changed political situation was noticable; but there was no agreement that the threat of socialized medicine which has darkened the deliberations of medical societies for so many years, has passed. A preliminary report from the Committee on Centennial Celebration indicated that this committee is perfecting a most comprehensive and impressive program for the meeting at Atlantic City next June.

H. B. MULHOLLAND
J. MORRISON HUTCHESON

THE FORUM

Simplified Ganglion Removal Technique.

Complete removal of a ganglion is a very difficult procedure when the entire ganglion is dissected free from the surrounding tissue, which may involve nerves, blood vessels, and tendons. Occasionally when one is removed the tendon sheath is found to have also been removed, which may cause trouble. The ones that originate between the carpal bones are still more difficult to remove completely. I have never found a patient willing to cooperate in trying the Family Bible technique of rupturing a ganglion, so have no personal information on the efficacy of this treatment.

For the last few years, I have used the following technique successfully:

The ganglion area is prepared in the usual manner and infiltrated with novocaine. A longitudinal incision is made down to the ganglion and skin retracted over the domed surface. An incision is then made into the ganglion and contents expressed. The thin whitish membrane which composes the lining of the ganglion is then grasped with a hemostat and removed by blunt dissection using a small curved hemostat as a dissector. As a general rule this membrane is easily removed. Since this membrane is the seat of the trouble, removal of same cures the condition. The remaining portion of the ganglion is not disturbed, so this eliminates considerable dissection and also keeps the operative field practically bloodless. The skin is closed in any desired manner. To my knowledge there have been no recurrences in approximately twenty-five cases in which this technique has been used.

NORMAN G. PATTERSON, M.D.,
Bristol, Tennessee.
306 Light and Power Bldg.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President ... MRS. J. E. HAMNER, Petersburg
President-Elect ... MRS. J. L. DECORMIS, Accomac
Recording Secretary ... MRS. M. H. HARRIS, West Point
Corresponding Secretary, MRS. MEADE EDMUNDS, Petersburg
Treasurer ... MRS. REUBEN SIMMS, Richmond
Editorial Chairman ... MRS. E. HOLLAND TROWER, Eastville

Do You Expect to Attend the National Meeting?

A few more months and the members of the Woman's Auxiliary to the American Medical Association will be arriving in Atlantic City, New Jersey, for their Annual Convention—June 9-13.

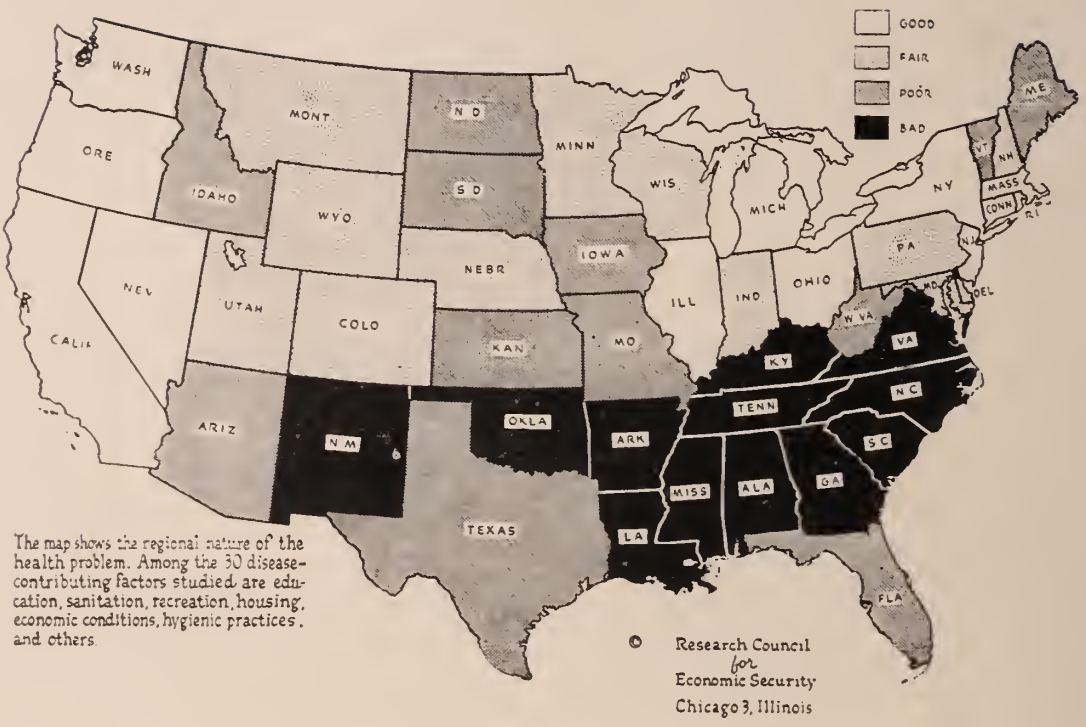
Have you made your reservations? If not, send your request at once to Dr. Robert A. Bradley, Chairman, Subcommittee on Hotels, 16 Central Pier, Atlantic City, New Jersey.

Dr. Hamner.

It is with regret that we announce the death of Dr. J. E. Hamner of Petersburg, husband of the President of the Auxiliary to the State Society. We extend our sympathy to her and her family.

EDITORIAL

Our National Health Problem



The map shows the regional nature of the health problem. Among the 30 disease-contributing factors studied are education, sanitation, recreation, housing, economic conditions, hygienic practices, and others.

Tuberculosis

IN 1940 when the data on which the map was made was published, Virginia had 58.8 resident deaths from tuberculosis per 100,000 population as compared with 46.1 deaths in the country as a whole. This rate was exceeded by only six states, Arizona, New Mexico, Kentucky, Tennessee, Maryland and Texas, and of these the first two are tuberculosis resort states. By 1944 Virginia had reduced her death rate to 40.2. In 1945 she was seventh from the highest among the states, if you excluded Arizona, New Mexico and the District of Columbia. It is estimated that there are about 15,000 cases now in Virginia with thousands in daily contact with them.

The Virginia Tuberculosis Association, which was organized in 1909 by Drs. Ennion G. Williams, W. F. Drewry, E. C. Levy and the Reverend J. T. Mastin, for educational purposes and to inaugurate special movements in particular communities, has issued a very informative report for the "Committee to Study Tuberculosis", of the "Virginia Advisory Legislative Council of the State of Virginia". This gives in an authoritative manner what has been done for tuberculosis in Virginia, what is being done, and what needs to be done. Virginia has 1.33 beds per death, whereas the Committee on Sanatorium Standards of the National Tuberculosis Association recommends 2½ beds per death. In this connection there is a waiting list for infirmary treatment of 284 persons. Perhaps the greatest need at present is more doctors and nurses so that existing beds will not remain unoccupied.

Among the recommendations of the Virginia Tuberculosis Association are: (1) A full time director, trained in public health and having a special knowledge of tubercu-

losis, who, under the supervision of the Commissioner of Health, shall have authority over the State sanatoria and over all tuberculosis field work. (2) Provision for adequate sanatorium care for all citizens needing treatment. This is to include facilities for major surgery within the sanatorium. (3) The encouragement of the fullest use of State sanatoria as training centers in tuberculosis. (4) Pre-employment and periodic x-ray examination of teachers and other school personnel, and the extension of mass x-ray examinations to school children, industrial and other groups. It is interesting to note that at present the Board of Health and the State Board of Education are undertaking an experimental demonstration study in five counties, in which all school children are to be x-rayed at least twice in their school life. All adults who come in contact with these children are to be x-rayed also.

Measures adequate to control tuberculosis "cost money, but cost less money than the consequent burden on the people caused by failure to make proper appropriation." As it stands now tuberculosis is the greatest killer among our people from the ages of fifteen to forty-five.

Eye Bank for Sight Restoration, Inc.

DR. DERRICK VAIL in an editorial in the *American Journal of Ophthalmology* for June 1946, gives an interesting progress report. The Eye Bank is now on a sound basis. It was legally incorporated in February 1945, "to carry on, directly or indirectly, such research, experimentation, etc., as may be reasonably calculated to be of value in saving, restoring, aiding, or preserving eyesight or in helping to prevent or avoid blindness or impairment of vision of any sort or to ameliorate the condition of the blind or those with defective eyesight; to maintain laboratories, clearing houses of information and the like for this purpose. . . . To aid, freely and voluntarily, in any manner which may be permitted by law, by loan, guaranty, grant, scholarship, fellowship, subsidy or otherwise any corporation or any surgeon, physician, scientist or student engaged in saving, restoring, aiding, helping to prevent or avoid blindness, or in whose work or welfare the corporation may have any other lawful interest. . . ." Thus it is seen that its powers are quite broad. At present it is actively engaged in furnishing eyes wherever needed and in training ophthalmologists in performing corneal transplants.

The American Red Cross and the airlines loyally contribute their services so that now all that one needs to do is to get in touch with the Eye Bank and an eye, sterile and preserved, is immediately shipped by air or messenger. In spite of this rapid transportation, regional branches are needed to complement and augment the work. Such a branch has recently been established in Chicago under the direct control of the Chicago Ophthalmological Society. The branch enjoys the support and legal backing of the Eye Bank. Surplus material that is not used within 12 to 24 hours is forwarded to New York. Calls on Chicago from the midwest that can not be satisfied are referred to New York. Information in regard to the technique of the Eye Bank can be obtained from the Eye Bank for Sight Restoration, Inc., 210 East 64th Street, New York.

The Eye Bank also has an educational program. Last year it awarded seven scholarships to ophthalmologists for training in the technique of the corneal grafting operation. This program is designed to obviate the necessity of the blind patient taking a long, expensive journey for his operation.

To see a patient whose sight has been restored by a corneal transplant gives one a peculiar thrill. Such experiences have been quite rare in the past. Until now it was

well nigh impossible to get the material and the patient together. Then, too, few ophthalmic surgeons have been trained in the meticulous, though relatively simple, technique of the corneal grafting operation. More power to the Eye Bank in its thrilling work!

North Carolina State Medical Society Meets in Virginia

FOR the first time in history the Medical Society of the State of North Carolina will meet in Virginia. The dates of this historical occasion are May 12, 13, and 14, and the place is Virginia Beach. The leading editorial of the *North Carolina Medical Journal* for February explains why Virginia is to be thus honored. At its last annual meeting the Society voted to return to Pinehurst for this year's meeting. After the meeting was over the manager of the Carolina Hotel notified Secretary McMillan that he could not permit the Society to meet there in 1947. Since then Dr. McMillan has done all that is humanly possible to find a suitable meeting place in North Carolina, but has been forced to find accommodations outside the State.

Good meeting places for medical societies are becoming scarcer and scarcer. Hardly more than half a dozen cities in the United States can take care of the annual meeting of the American Medical Association. The Southern Medical Association is having the same difficulty and twice has had to meet outside its own territory. State Societies are growing so big that they, too, are having trouble. There are not more than three places in Virginia that can adequately take care of the annual meeting of the Medical Society of Virginia. Special societies also have their troubles. With a membership of from 100 to 200, and an attendance of perhaps one hundred, they do not appeal to the large convention places, and their demands in the way of meeting place and living accommodations are too exacting for the smaller resort hotels. For instance, the American Gynecological Society this year is meeting in the only place that was available for the usual time of its annual meeting. The American Association of Obstetricians, Gynecologists and Abdominal Surgeons has found it necessary to arrange for its annual meeting two years in advance.

In the matter of meeting places for medical meetings, Virginia, with its Hot Springs, Colonial Williamsburg, Virginia Beach, Richmond and Roanoke, is more fortunate than most States. She can take care of all but the largest medical meetings, and she rejoices in being in a position of being helpful to her sister State. North Carolina and Virginia doctors have the same background and their problems, traditions and ideals are identical. Nothing but a poorly marked State-line separates them. We welcome our brothers of North Carolina to our State for their annual meeting and predict that they will feel as much at home as if they were meeting amid the beautiful long leaf pines.

SOCIETIES

Virginia State Board of Medical Examiners.

The following doctors were granted certificates by the State Board of Medical Examiners as a result of examinations held in Richmond in December 1946:

BY EXAMINATION

Dr. Richard Norton Baylor, Richmond.
Dr. James Harry Bocock, Norfolk.
Dr. David J. Cornick (Col.), Norfolk.
Dr. Anthony Francis Distefano, Portsmouth.
Dr. David M. Dumville, Richmond.
Dr. Edward M. Eppes, III, Richmond.
Dr. Abraham Jack Freund, Richmond.
Dr. Robert Emerson Fultz, Richmond.
Dr. Robert Ellsworth Gibson, Charleston, W. Va.
Dr. Michael I. Hanna, Holden, W. Va.
Dr. Mann Terrell Lowry, Sampson, New York.
Dr. Martin Markowitz, Richmond.
Dr. Ben Thomas Painter, Williamsburg.
Dr. Joseph E. Pisano, Brookneal.
Dr. William C. Robertson, Norfolk.
Dr. Olindo W. Rosanelli, Norfolk.
Dr. Franklin C. Turner, Richmond.
Dr. Richard Kennon Williams, Richmond.

BY RECIPROCITY

Dr. William Morris Anderson, Richmond.
Dr. George Stephen Appleby, Martinsburg, W. Va.
Dr. Sidney Raymond Arnold, Amherst.
Dr. James Paul Bailey, Hampton.
Dr. Barnwell Rhett Baker, Winchester.
Dr. Charles William Beaven, Newsport News.
Dr. Richard E. Bower, Richlands.
Dr. Barrington H. Bowser (Col.), Richmond.
Dr. Julius Charles Breme, Purcellville.
Dr. James Graham Brown, Norfolk.
Dr. Samuel Walthall Budd, Jr., Richmond.
Dr. Philip Burka, Washington, D. C.
Dr. James Anthony Campbell, Jr., Roanoke.
Dr. John Winston Capps (Col.), Hampton.
Dr. John Paul Carter, Washington, D. C.
Dr. W. Smott Carter, Middleburg.
Dr. Gordon G. Carmichael, Roanoke.
Dr. Francis Sinclair Chance, Marion.
Dr. Daniel Duncan Chiles, Radford.
Dr. Maynard Irving Cohen, Washington, D. C.
Dr. Lee Marion Cole, Jr., Christianburg.
Dr. Harold F. Corson, Richmond.
Dr. Richard W. Crossen, Richmond.
Dr. Julius Daniel Damian, Arlington.
Dr. Alfred A. J. Den, Washington, D. C.
Dr. Michael P. DeVito, Washington, D. C.
Dr. Michael George Dewey, Hampton.
Dr. Arthur Dick, Washington, D. C.
Dr. Robert H. Duenner, Newark, Del.
Dr. Frank F. Ellis, Jr., Lynchburg.
Dr. Mark Exley, Norfolk.
Dr. Joseph Edwin Faingold, Roanoke.
Dr. Henry Bennett Fletcher, Arlington.
Dr. Maurice Winfield Frazier (Col.), Washington, D. C.
Dr. Paul Edmund Halter, Alexandria.
Dr. Eddie W. Harris, Jr. (Col.), Petersburg.
Dr. William Henry Harris, Jr., Richmond.
Dr. Rose S. Hartman, Norfolk.
Dr. Kathryn Hill, Virginia Beach.
Dr. T. Wiley Hodges, Richmond.
Dr. Ebbe Curtis Hoff, Richmond.
Dr. Oswald Warrington Hoffler (Col.), Washington, D. C.
Dr. George G. Hollins, Jr., Norfolk.
Dr. William Howard Hosfield, West Point.
Dr. Herbert Saul Jackman, Richmond.
Dr. Robert Ernest James, Arlington.
Dr. C. Frederick Johnston, Jr., Grundy.
Dr. Granville L. Jones, Williamsburg.
Dr. Lorraine L. Jones (Col.), Farmville.
Dr. Harry James Jordan, Arlington.
Dr. William H. Kelly, Norfolk.
Dr. Lambert Joseph Kerschgens, Steubenville, Ohio.
Dr. George Morris Kersey (Col.), Atlanta, Ga.
Dr. Meyer I. Krischer, Norfolk.
Dr. Lillian P. Kravis, Arlington.
Dr. Charles E. Law, Alexandria.
Dr. Joseph D. Lea, Norfolk.
Dr. John B. Leary, Arlington.
Dr. Allen Edwin LeHew, Clifton Forge.
Dr. Robert Charles Livingstone, Petersburg.
Dr. John Louzan, Alexandria.
Dr. James Murdock MacMillan, Richmond.
Dr. Stephen Mamick, White Sulphur Springs, W. Va.
Dr. John Orburn Marcy, Bristol, Tenn.
Dr. Frank Maresh, Catawba Sanatorium.
Dr. Thomas Adrian Martin, Petersburg.
Dr. Ernest James McCampbell, Williamsburg.
Dr. Charles E. McKeown, Richmond.
Dr. Benjamin Miller, Newport News.
Dr. Thomas James Moran, Danville.
Dr. Leon I. Nathanson, Alexandria.
Dr. Bernard Notes, Washington, D. C.
Dr. Samuel O. Payne (Col.), Fredericksburg.
Dr. Leroy S. Pearce, Lynchburg.
Dr. Azelie Winifred Phillips (Col.), Petersburg.
Dr. Samuel Pillar, Roanoke.
Dr. Elbert Hugo Pogue (Col.), Bedford.
Dr. Homer Hayden Price, Fieldale.
Dr. Joseph James Quarles, Jr. (Col.), Norfolk.
Dr. Joseph Archer Ravenel, Martinsville.
Dr. Ernest S. Roberts, Hampton.
Dr. Eric C. Schelin, Richmond.
Dr. Albert F. Schmidt, Norfolk.
Dr. Seymour Schotz, Richmond.
Dr. Elmer Charles Schultz, Charlottesville.
Dr. Raymond Schwartz, Arlington.
Dr. C. Waldo Scott, Washington, D. C.

Dr. John S. Selden, Jr. (Col.), Norfolk.
Dr. Alvin Seltzer, Washington, D. C.
Dr. June Carol Shafer, Arlington.
Dr. Henrik W. Shelley, Chincoteague Island.
Dr. Claude Porter Sherman, Martinsville.
Dr. Sigmund Henry Smedal, Alexandria.
Dr. Charles G. Souder, Leesburg.
Dr. William Conrad Stone, Roanoke.
Dr. George Foster Sutherland, Big Stone Gap.
Dr. Frank William Sutterlin, Bristol.
Dr. Forrest M. Swisher, Arlington.
Dr. Francis D. Threadgill, Washington, D. C.
Dr. Frederick Preston Titus, Baltimore, Md.
Dr. Eulyss Robert Troxler, Roanoke.
Dr. Deane Harold Vance, Washington, D. C.
Dr. Robert Browning Venner, Virginia Beach.
Dr. Harold E. Wager, Charlottesville.
Dr. Joseph E. Warren, Lynchburg.
Dr. Fred Cecil Watson, Los Angeles, Calif. (Intended Petersburg)
Dr. Robert C. Wesley (Col.), Petersburg.
Dr. William James White, Arlington.
Dr. LeRoy Ellwood Wible, Pittsburgh, Pa.
Dr. Franklin S. Wilcox, Radford.
Dr. William Byrd Wiley, Norfolk.
Dr. Prentiss Willson, Jr., Arlington.
Dr. Thomas H. Weaver, Alexandria.
Dr. Jacob Joseph Weinstein, Washington, D. C.
Dr. W. Eugene Wolcott, Warrenton.
Dr. Oscar D. Yarbrough, Clifton.
Dr. Samuel W. Doskof, Alexandria. Certificate not actually issued because applicant had incomplete credentials.

Richmond Academy of Medicine.

The Section of the Academy on the History of Medicine held its annual meeting in the Academy Building on the evening of March the 11th, to which were invited wives of the members of Academy. Dr. Alexander G. Brown, Jr., chairman, presided. Papers presented were:

Medical Service in the United States Army in World War II—Colonel Joseph H. McNinch, M.C., from the Office of the Surgeon General, Washington, D. C., and

An International Drama—Dr. John Bell Williams, Richmond.

The scientific program was followed by an informal reception in the dining room.

Dr. Harry J. Warthen was elected chairman of this Section for the coming year, with Dr. A. S. Brinkley as vice-chairman, and Dr. Ennion S. Williams as secretary-treasurer.

Albemarle County Medical Society.

At the meeting of this Society on March 6th, Dr. George Cooper of Charlottesville was elected secretary to succeed Dr. C. Marshall Lee, Jr., resigned.

Danville-Pittsylvania Academy of Medicine.

The following are officers of the Academy who were elected to serve for the year 1947: President, Dr. M. H. Watson; vice-president, Dr. Snowden C. Hall; secretary-treasurer, Dr. M. H. McClintic. All are of Danville.

Bedford County Medical Society.

Officers of this Society elected for the year 1947 are: President, Dr. W. G. Hardy; vice-president, Dr. E. L. Johnson; and secretary-treasurer, Dr. William V. Rucker, all of Bedford.

Roanoke Academy of Medicine.

At the March meeting of the Academy, Dr. E. M. Holmes, Director, State Venereal Disease Control, Richmond, spoke on "The Problems of Penicillin Therapy in Venereal Disease"; Dr. J. N. Dudley, Roanoke, on "Activities of Local Health Department"; and Dr. Linwood D. Keyser, also of Roanoke, on "Advances in the Treatment of Urinary Calculi".

Dr. Charles A. Young is president of the Academy and Dr. W. H. Saunders, secretary-treasurer.

Virginia Peninsula Academy of Medicine.

Dr. Charles Troland, associate professor of neurosurgery of the Medical College of Virginia, Richmond, addressed the Academy at its regular meeting on March 17th. His subject was "Acute Head Trauma".

There was an attendance of sixty-five and Dr. Robert Wright, Phoebus, presided.

CHESTER D. BRADLEY, *Secretary-Treasurer.*

NEWS

State Society Meeting.

The Council set dates for the next meeting of the Medical Society of Virginia in Roanoke as October 13, 14 and 15, with headquarters at Hotel Roanoke. Other hotels in Roanoke are the Patrick Henry and the Ponce de Leon, both of which are in walking distance of headquarters. It is recommended that those expecting to attend should make reservations promptly. Dr. Frank Farmer is general chairman of the Committee on Arrangements and has the following doctors assisting him:

Dr. George S. Hurt—Hotels and Halls.

Dr. Charles Peterson—Entertainment.
Dr. David Garner—Commercial Exhibits.
Dr. W. W. S. Butler—Scientific Exhibits.

In looking over records, it was found that this will be the 100th meeting of the Medical Society of Virginia, there having been several gaps in times of meeting since the organization of the original Society in December 1820, so this will be the Centennial meeting. It is hoped that members will make reservations promptly and help make this one of the biggest meetings of the Society.

News from the University of Virginia, Department of Medicine.

On February 7th and 8th the National Conference on Rural Health held its second annual meeting in Chicago. Dr. H. B. Mulholland, Professor of Medicine, was co-chairman of the round table discussion, "Methods of Bringing and Holding Physicians and Dentists in Rural Areas".

Dr. William Gayle Crutchfield, Professor of Neurological Surgery, spoke before the Fifteenth Annual Assembly of the Southeastern Surgical Congress in Louisville, Kentucky, on March 10th, on "Surgical Treatment of Hypertension".

On January 28th Dr. Samuel Alexander Vest, Jr., Professor of Urology, spoke before the New Jersey Summit County Medical Society on "Prostatic Cancer". On February 24th, he held several clinics at the seminar at the University of Alabama and was guest speaker on "Male Endocrinology".

The Phi Beta Pi Medical Fraternity had Dr. Harold L. Stewart of the National Cancer Institute on March 21st as guest speaker. Dr. Stewart spoke on "Experimental Gastrointestinal Cancer".

Heads American Cancer Society.

At the meeting of this Society in Chicago, early in March, Dr. Edwin P. Lehman was elected president, succeeding Dr. Frank E. Adair of New York City. Dr. Lehman is professor of surgery and gynecology at the University of Virginia, Department of Medicine, and has been most active in the fight against cancer in Virginia.

Dr. William Eickers,

Richmond, was guest speaker at the regular monthly meeting of the Fayette County Medical Society, Montgomery, W. Va., on March the 7th, his topic being "Disorders of Menstruation".

The American Public Health Association

Announces its 75th annual meeting as taking place in Atlantic City, New Jersey, October 6-10, inclusive, 1947. Helping the Association to celebrate its 75th annual meeting will be the following organizations: American School Health Association; Association of Maternal and Child Health Directors; Association of Reserve Officers of the U. S. Public Health Service; Association of State and Territorial Health Officers; Conference of Municipal Public Health Engineers; Conference of Professors of Preventive Medicine; Conference of State and Provincial Public Health Laboratory Directors; Conference of State Directors of Health Education; Conference of State Directors of Public Health Nursing; Conference of State Sanitary Engineers; National Committee of Health Council Executives; Public Health Cancer Association.

Exhibits and the scientific program will point up progress in public health over a 75 year span.

Dr. Blalock Heads Mental Hygiene Society.

At the eleventh annual meeting of this Society, held in Richmond on March 5th, Dr. Joseph Blalock, superintendent of the Southwestern State Hospital, Marion, was elected president, and Mr. F. W. Gwaltney, Richmond, was re-elected executive secretary.

Army Medical Library Microfilm Service.

During the war, the Army Medical Library through its photoduplication services supplied millions of pages of microfilmed medical articles to the Armed Services and other Research Agencies. This service is now generally available for civilian physicians, institutions and research workers on a cost basis. This means direct access to the library's enormous resources of medical literature.

A fee of fifty cents is charged for filming any periodical article in a single volume, regardless of length. Microfilming from monographs is furnished at fifty cents for fifty pages or fraction thereof. Photostats are also available at a charge of fifty cents per ten pages or fraction thereof. Material filmed is not for reproduction without permission of the copyright owner.

For convenience and to keep bookkeeping costs down, a coupon system has been established. Users may buy any quantity of photoduplication coupons at fifty cents each. Order blanks are available upon request. Checks should be made payable to the

Treasurer of the United States, and sent to the Army Medical Library, 7th St. and Independence Ave., S.W., Washington 25, D. C.

Quarterly Review of Obstetrics and Gynecology—New Editor.

We are pleased to note that Dr. Bayard Carter of Duke University has succeeded the late Dr. Howard Kane as Editor-in-Chief of the *Quarterly Review of Obstetrics and Gynecology*. This will insure a continuation of the high standard of this useful review in this important field.

In this connection we might call attention to the latest member of the great group of Reviews that are published by the Washington Institute of Medicine, i.e., the *Quarterly Review of Psychiatry and Neurology*, which is now starting its second volume. The Editor-in-Chief of this is Winfred Overholser, M.D. The other quarterly reviews of this publisher are ophthalmology, Surgery, Radiology, Otorhinolaryngology and Broncho-Esophagology, Allergy and Applied Immunology, Pediatrics, Urology, Medicine, Dermatology and Syphilology, and General Practice Clinics. The latter is edited and designed for the general practitioner, and has perhaps a more impressive editorial board than any of the *reviews*.

Dr. C. Marshall Lee, Jr.,

Of Charlottesville, has accepted an offer to join the permanent staff of the Norburn Hospital, Asheville, N. C., and entered upon his work there the first of April.

Duke University School of Medicine.

The Duke Medical Alumni will hold their second reunion on April 24-26, in Durham, N. C. The following program has been prepared, with the graduates and those who trained at Duke to give the papers.

THURSDAY MORNING—APRIL 24TH

Registration.

THURSDAY AFTERNOON

Dr. O. J. Bateman, '39—"Use of A.A.L. in Gold Poisoning".

Dr. Charles Styron, '38—"The Genito-Urinary System in Diabetes Mellitus".

Dr. George Harrell, '36—"Plasma Volume and Extra-Vascular Thiocyanate Space in Rickettsial Spotted Fever".

Dr. B. B. Dalton, '32—"Meeting the Problems of the General Practitioner".

Dr. P. B. Parsons, '36—"Intra-abdominal Herniation. Its Radiological Diagnosis".

Mock Clinic (by Junior and Senior students).

Class and/or Departmental entertainment.

FRIDAY—APRIL 25TH

Dr. George Gilbert—House officer 1939-44—"The Cellular Changes in Carcinoma of the Prostate Following Hormonal Therapy".

Dr. Paul Reque, '34—"An Evaluation of the Use of Antibiotics in Dermatology".

Dr. J. S. Hiatt, Jr., '40—"Pneumoperitoneum in the Treatment of Pulmonary Tuberculosis".

Dr. David Wilson, House officer 1942-46—"Lucite Balls in the Treatment of Pulmonary Tuberculosis".

Dr. Harold H. Kuhn, '40—"Open Versus Closed Treatment of Acute Osteomyelitis".

Exhibits.

Business Meeting.

Presentation of New Officers.

Reunion of 65th General Hospital and 38th Evacuation Hospital.

Open House—Local Alumni.

Dinner-Dance—Hope Valley Country Club.

SATURDAY, APRIL 26TH

Dr. Eleanor Easley, '34—"A Study of Maternal Morbidity with the Use of Caudal Anesthesia".

Dr. Robert H. Pudenz, '35—"Cranial Trauma and Brain Movement. Direct Observation of the Brain with High Speed Cinematography".

Dr. R. H. Rigdon, House officer 1931-35—"Consideration of the Mechanisms by which a Rapid Diminution Occurs in the Parasitemia in Ducks Infected with P. lophurae".

Dr. David A. Young, House officer 1935—Title later.

Dr. Charles W. Hock, '41—"Radiation Injuries of the Intestines".

Duke-Navy Baseball game.

Dr. Chester D. Bradley,

Formerly associated with Dr. Waverly R. Payne and Dr. Harvey G. Bland of Newport News, announces the removal of his practice to offices on West Avenue at 30th Street. His work will be limited to Obstetrics and Gynecology.

Dr. Charles F. James,

Class of '38, Medical College of Virginia, announces the opening of his office for the practice of general surgery in Washington Square Building, Tallahassee, Florida. He has recently been released from service in the Army.

The Yater Clinic

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Medical Officers Wanted.

The U. S. Civil Service Commission has announced an examination for filling Medical Officer positions. These positions are located in various Federal agencies, in Washington, D. C.; in the U. S. Public Health Service and the Indian Service, throughout the United States; and in the Panama Canal Service, in the Panama Canal Zone. Salaries range from $4,149 to $5,905 a year, with higher salary rates for the Canal Zone positions. No written test will be given for these positions. To qualify, all applicants must be graduates of a medical school of recognized standing and must also meet other requirements which include experience and training in the field of medicine. The age limits are 45 years for Panama Canal Zone positions and 62 years for other positions.

Interested persons may secure information and application forms from most first- and second-class post offices, from Civil Service regional offices, or from the U. S. Civil Service Commission, Washington 25, D. C. Applications must be filed not later than April 22, 1947.

American College of Chest Physicians.

The thirteenth annual meeting of the American College of Chest Physicians is scheduled to be held at the Ambassador Hotel, Atlantic City, New Jersey, June 5 to 8. An interesting scientific program has been planned for this meeting. Prominent speakers from other countries will present papers.

The oral and written examinations for Fellowship will be held on the first day of the meeting, June 5. Applicants for Fellowship in the College who plan to take these examinations should communicate *at once* with the Executive Secretary, American College of Chest Physicians, 500 North Dearborn Street, Chicago 10, Illinois.

The Convocation for new Fellows and Life Members of the College will be held on Sunday, June 8. At this time certificates will be awarded to Fellows and Life Members admitted since June 1946.

Dr. S. E. Massey

Has returned to Wytheville for the Spring and Summer, after spending the winter in Lakeland, Florida.

Dr. G. C. Godwin,

Who has been with the Richmond City Health Department for the past sixteen months as Tuberculosis Control Director, whose duties included supervision of Pine Camp, the city's tuberculosis sanatorium, has resigned, effective April 30, to take a position with the VA tuberculosis hospital at Oteen, N. C.

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Many inquiries come to this office for doctors in rural communities. If interested in such, send your name to this journal, 1200 East Clay Street, Richmond 19, Va. (*Adv.*)

OBITUARIES

Dr. John Aldridge Gibson,

Prominent physician of Leesburg, died March 9th after an illness of several weeks. He was seventy-one years of age and received his medical degree from the University of Maryland in 1901. Dr. Gibson had practiced in Loudoun County since 1903. He was a past president of the Leesburg Rotary Club and a member of the Loudoun County Hospital board of directors. At the time of his death he was president of the Loudoun County Medical Society. Dr. Gibson had been an active member of the Medical Society of Virginia since 1909, having served as vice-president and member of various committees. His wife, two daughters and a son survive him.

Dr. William Miller Holman,

Widely known physician of Goochland County, died February 22nd at his home in Richmond. He was eighty-seven years of age and a graduate of the Medical College of Virginia in 1890. Dr. Holman had practiced in Goochland County until his retirement last year and he had always taken an active part in the civic and religious affairs of the County. He had been a member of the Medical Society of Virginia for fifty-five years. His wife and nine daughters survive him.

Dr. John Edward Hamner,

Well known physician of Petersburg, died February 24th after an illness of six weeks. He was born in Amelia County in 1892 and graduated from the Medical College of Virginia in 1916. Dr. Hamner served in World War I with Base Hospital No. 45, following which he became a member of the staff of Central State Hospital in Petersburg. He then practiced for sometime in West Virginia, returning to Petersburg in 1934. Dr. Hamner was prominent in civic and medical affairs and was a member of the Medical Society of Virginia.

Dr. Hamner is survived by his wife, who is president of the Woman's Auxiliary to the Medical Society of Virginia, and by four children by a former marriage.

At a called meeting of the Petersburg Medical Faculty, held February 24, 1947, the following resolutions were presented and unanimously adopted:

First: Inasmuch as it has pleased Almighty God, our Heavenly Father, to take from our midst our friend and associate, Dr. John E. Hamner, while bowing to His Will, we deeply deplore our loss.

Second: That in the passing of Dr. John E. Hamner, our faculty has lost an extremely valuable member: one whose kindly manner, uniform courtesy, and general worth both as a man and a physician we all appreciated and will long remember.

Third: That we extend to his family our deepest sympathy.

Fourth: That a copy of these resolutions be sent to the family, included in the minutes of the Petersburg Medical Faculty, and published in the public press and in the VIRGINIA MEDICAL MONTHLY.

MUNFORD R. YATES, *President,*
Petersburg Medical Faculty.

Dr. James Henry Deyerle,

Prominent physician of Harrisonburg, died November 26, of coronary occlusion. He was seventy years of age and a graduate from the former University College of Medicine, Richmond, in 1901. He had been a member of the Medical Society of Virginia since that year. He had served as health officer of Harrisonburg and physician at Madison College, and also on the staff of Rockingham Memorial Hospital.

Dr. Charles R. Vance,

Bristol, Tenn., since 1900 a member of the Medical Society of Virginia, died February the 26th, at the age of seventy-nine. He was a graduate in medicine of the University of Virginia in 1891, and practiced in Norfolk until he moved to Bristol in 1935. His wife survives him.

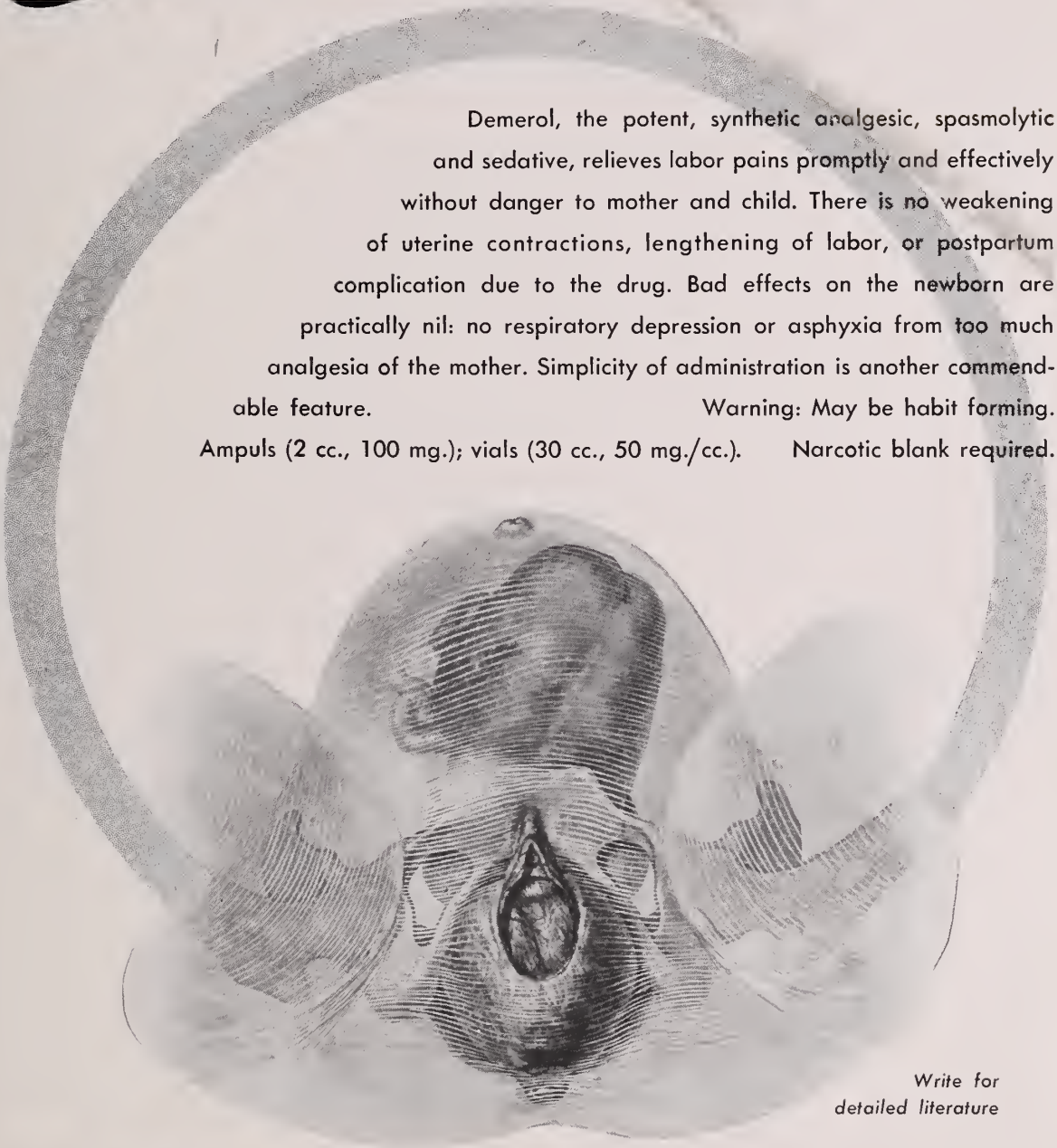
Dr. William Samuel Scott,

Retired Navy medical officer of Richmond, was killed by a hit and run driver on March 6th. He was a native of Fredericksburg and fifty-two years of age. Dr. Scott received his medical degree from the University of Virginia in 1916 and enlisted in the U. S. Navy during World War I. His wife survives him.

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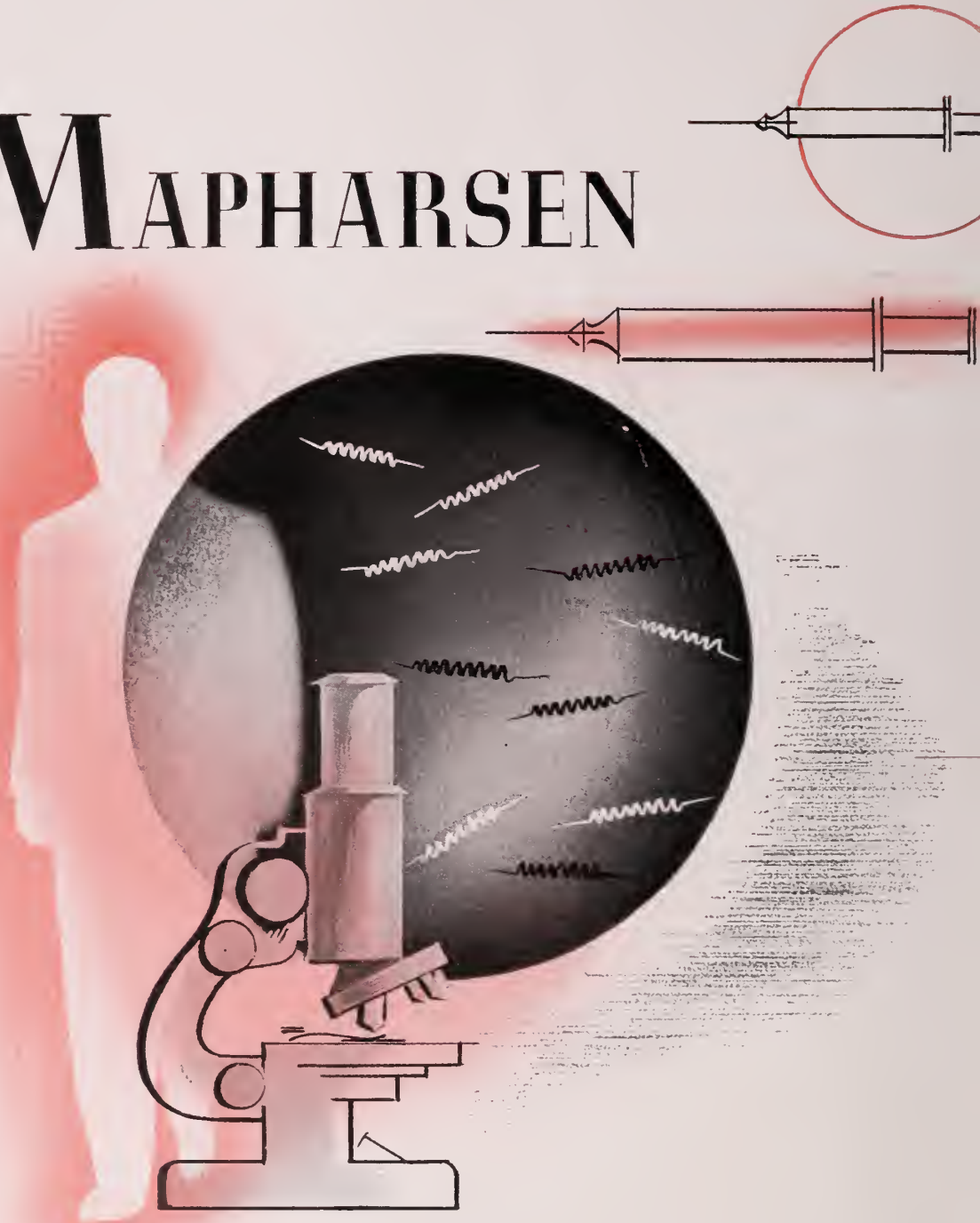


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A REVIEW OF SOME OF THE PAST AND PRESENT TYPES OF PSYCHIATRIC THERAPY*

J. R. Saunders, M.D.,
Richmond, Virginia.

The changes that have taken place in the treatment of the mentally sick during the past several centuries have been phenomenal. The most remarkable changes no doubt have taken place during the last one hundred years. We should be proud of the part our country has played in the revolutionary changes that have occurred. Time will not permit me to give you the details of the part played by various individuals in this and other countries, who contributed so much to the advancement of psychiatry and psychiatric therapy.

Ignorance and fear have at last given way to understanding of the so-called insane. Consequently, great changes have taken place in the methods of treatment of the mentally ill.

Psychiatric treatment in its historical development demonstrates that treatment has always been dependent on the status of medicine at the time. When we look back on some of the methods that were used to treat the mentally sick years ago, we wonder what was the state of mind of those who instituted any such methods of treatment. Let us hope that psychiatrists of future generations will not look on some of the treatment used by us at the present time in the same light.

Psychiatric history has been divided into periods or eras by various individuals. It seems to me that the eras described by Dr. William C. Menninger are quite comprehensive. He divides psychiatric history into five periods: the Ancient Era from 2500 B. C. to 200 A. D.; the Christian Era from 200 A. D. to 1500 A. D.; the Reformation and Renaissance from 1500 to 1750 A. D.; the Era of Enlightenment from 1750 A. D. to 1890 A. D.; the Modern or Analytic Era from 1890 to date.

Throughout the Ancient Era the early primitive people regarded diseases and particularly mental diseases as an expression of the will of some supernatural being, the wrath of some offended god or as punishment for sin. Since it was thought that mental derangement was brought on the individual by evil spirits, the treatment usually consisted of methods that were necessary to counteract the wrath of the demons and win favor of the benevolent gods. As a result, various sorts of ceremonies and all forms of magic were resorted to. Shrines were established in Babylonia, Assyria, Phenicia, Egypt and Greece. The treatment of mental derangement during this period came into the hands of priests who also acted as physicians. This period has been described by some as the Priest-Physician Age. Many of the shrines were located near what was thought to be medicinal springs. Important characters who can be associated with psychiatry during this period included first Pythagoras, the famous Greek, who considered the brain as the organ of higher activities. His method of treatment was special dietary measures, the leading of a moral life, in which moderation and occupation were essential features. The fragmentary records available indicate that the therapy at that time compared not unfavorably with psychiatric therapy of the present day.

Greece reached the highest development of the Priest-Physician Age in the worship of Aesculapius and in one of these centers Hippocrates, usually regarded as the father of medicine, was taught. Hippocrates must be given credit for first declaring about 400 B. C. that mental disease is a physical disease of the brain due to natural causes and not divine influence—a belief to which we still subscribe, although we cannot always demonstrate the truth.

*Read before The Neuropsychiatric Society of Virginia, Richmond, April 17, 1946.

Plato and Aristotle, although classified as philosophers, were both interested in the mental life of men. Both maintained but did not advance the mental understanding of mental disorders beyond the teachings of Hippocrates. Plato's writings, produced about 380 B.C., dealt especially with mental hygiene, probably more advanced than what we are prone to think of as modern thought. Plato stated, "Education should begin before birth. Therefore, no man or woman should procreate unless in perfect health."

Hippocrates described dementia, melancholia and mania. At that time it was the general belief that all mental disturbances were caused by "humors". The four humors were yellow and black bile, blood and mucus. Consequently, all treatment revolved around this theory. In addition to sacrifices, prayers, etc., the Greeks instituted bleeding and purging as therapy.

The Christian Era (200 A. D. to 1500 A. D.) saw the end of treatment of mental sickness along medical lines. There was a reversion to superstition and magic. The treatment during this era deteriorated rapidly and consisted almost of cruelty. The outstanding forms of treatment were torture, burning, chaining, confinement in dungeons, starvation and death by various methods.

The 15th century is to be recalled as the Age of Witchcraft. Mental illness was believed to indicate a league with the Devil. Egypt, however, held true to its former culture and it is recorded that in 1250 A. D. mentally sick were admitted to a general hospital in Cairo.

During the latter part of the Christian Era a group of individuals known as mystics and astrologers appeared and grew in importance. With them treatment was controlled by signs of the Zodiac.

The Reformation and Renaissance Era (1500 A.D. to 1750 A.D.) saw the starting of mental hospitals, but the plight of the mental patient continued deplorable. Treatment consisted primarily in segregation of patients with attendants who were little more than convict guards, providing the poorest of food, straw beds and vermin. The patients were usually kept in chains in unlighted cells and without medical treatment. Blood letting, being a fashionable remedy in medicine at that time, was applied freely in all kinds of psychiatric disorders. In the 17th century calomel and various salts began to be highly advocated. Opiates were recommended by Paracelsus in the 17th century, sometimes for gastro-intestinal symptoms but chiefly to induce rest and sleep. The idea continued to prevail in this era that mental illness resulted from some form of infestation and patients were treated by putting them in whirling machines and surprise baths. They were subjected to unexpected noises or offensive odors for the purpose of driving out the demon. Patients were frequently bound to rotary machines to produce nausea, as it was thought that nausea had a calming effect. It was thought that pain was indicated to stimulate withdrawn, negativistic patients. These erroneous ideas persisted until physiology and psychology were in position to study sensations. The milder cases received very little, if any, attention and were allowed to roam the streets and beg alms.

The cultural changes that took place in the 18th century brought about a remarkable change in the attitude toward and treatment of mentally ill patients. Beginning with the year 1750 and ending with the year 1890 can well be called the Era of Enlightenment so far as the mentally ill were concerned. However, it took years to overcome erroneous conceptions and to have modern theories accepted. The change in attitude was first manifest in the method of care by means of hospitalization.

We cannot adequately discuss the changes that took place in psychiatric therapy during this era without mentioning briefly the names of those who were responsible for the great changes that took place. The names of Pinel and Tuke are quite important, but Benjamin Rush is considered the father of American psychiatry. Perhaps no one American layman has done more for the mentally ill than Dorothea Lynde Dix who lived in this era.

In this same era Franz Anton Mesmer revived the hypnotic idea under the guise of magnetism. Mesmerism is of importance in connection with the history of psychiatry, because it introduced a new note into mental therapy and it was partly responsible for psychic influence becoming such a factor in the causation and treatment of psychoses.

S. Weir Mitchell is mentioned prominently in this era, especially due to his advocacy of rest treatment for nervous patients. His program consisted chiefly of a planned program of mild activities, careful dietary supervision and much bed rest.

During this era hospital organization and treatment was gradually solved. However, many of the treatments used in the hospitals continued to ap-

proach the inhumane type of treatment used in the dark eras of psychiatry. Many methods of mechanical restraint were used at that time which are now greatly condemned. The problem of restraint is still quite a debatable subject. There are many psychiatric hospitals where one or another form of mechanical restraint is used. At the end of this era, chemical restraint, made possible by the discovery of various alkaloids and sedatives, was considered preferable over mechanical restraint. Much has been written about mechanical *versus* chemical restraint.

Hydrotherapy began to be used in a more humane way in this era in the form of prolonged baths and cold or warm wet packs. This probably has been found to be a useful substitute for restraint in many instances. Despite the intensive use of hydrotherapy, little is known about its physiological action. It is still impossible to state how much relaxation is due to psychological and how much is due to physiological factors.

Although occupational therapy had been mildly introduced as psychiatric therapy prior to the Era of Enlightenment, the main principles of occupation were not recognized until the 18th century. At this time occupational therapy was developed along different lines. Many physicians felt it necessary to stress that occupation should be used only for distraction, while others urged the use of work which needed to be done in a hospital or which was of value. The fear of causing hospitals to develop into work houses has not subsided even as yet. It is my opinion that occupational therapy should never lose its place as such in the organization of a mental hospital. An intelligent and highly specialized person should be at the head of such a department but always subordinate to the physician.

The Modern or Analytic Era has been described as having its beginning in the year 1890, for it was about that time that Dr. Sigmund Freud was instrumental in laying the groundwork for the Analytical Age by the introduction of psychoanalysis. Treatment during this era is difficult to analyze fully, but it is thought by many that great advances have been made through psychotherapy by means of psychoanalysis in one form or another.

Occupation, recreation and education have gradually found their places in psychiatric therapy. If we think of education as a form of psychiatric therapy, we should perhaps closely associate it with a movement that was instituted in this country by Clifford Beers, a prominent layman. I am speaking of Mental Hygiene, which undoubtedly has a very important place in psychiatric therapy.

Dietary changes no doubt have brought about marked improvement in chronically ill patients and have furthered the recovery of excited and depressed patients who would have died previously. In this connection most of us can recall that not so many years ago all mental institutions were called upon to treat a great number of patients suffering from psychosis with pellagra. To substantiate this, I will cite you some statistics taken from the biennial reports of the State Hospital at Morganton, North Carolina. In the year 1931, sixty-one patients were admitted to that institution with a diagnosis of psychosis with pellagra. That same year twenty-two deaths are recorded as due to pellagra. In the year 1945, only one patient was admitted with a diagnosis of psychosis with pellagra, and in the same year no deaths were recorded as due to pellagra.

The beneficial effects of nicotinic acid in the treatment of human pellagra were demonstrated independently and simultaneously by four groups of workers in 1937. Since then there have been numerous reports of the successful use of nicotinic acid in the treatment of pellagra. That nicotinic acid is one of the factors in vitamin B was shown by Funk, who isolated it from yeast in 1912; but it was Goldberger and his associates who proved the existence of a pellagra-preventive factor in vitamin B. And thus was instituted a rational method of combating pellagra, which I have shown was a contributing factor in the causation of many cases of psychoses just a few years ago.

Most of us have also witnessed the great changes that have taken place in the treatment of general paresis. The introduction of the Wassermann test and the demonstration by Noguchi and Moore in 1913 of the presence of the spirochete in the brain immediately placed the treatment of paresis on a sound footing. At first it was mercury, iodides and arsenicals, but it was found that chemotherapy alone was none too effective in combating the disease. However, there was no remarkable change in therapy for general paresis until 1918. In that year Wagner von Jauregg published a report on

the effect of malaria on general paresis. Treatment of general paresis by malarial therapy was perhaps first used in this country in late 1922 at St. Elizabeths Hospital in Washington, D. C. In 1929 Neymann and Osborne first described the production of electropyrexia and later reported successful results in cases of general paresis. At present electropyrexia or modification of it is being used extensively, but it has not altogether replaced malarial therapy. Both types of fever therapy are used in combination with chemotherapy, and, although a difference of opinion exists as to the relative merits of each, it is commonly agreed that either one used in combination with arsenicals is far superior to the old chemotherapeutic method alone. Another form of treatment for general paresis, which is only in its infancy, is penicillin therapy. It is undoubtedly too early to judge accurately whether this form of therapy alone will prove effective enough to replace the other forms of therapy that are accepted at the present time.

Despite the fact that much research has been done on epilepsy, the treatment of epilepsy has undergone no remarkable change since the introduction of phenobarbital as the outstanding therapeutic measure. Other drugs have, of course, been introduced, but no doubt phenobarbital or some closely allied drug is still more widely used than any other drug.

Just after the end of World War I, in the year 1919, there was much discussion of the part played by foci of infection in medicine, and mental patients and mental diseases did not escape. Dr. Cotton perhaps did more work along this line among the mentally ill than anyone else. The wholesale removal of parts of the gastro-intestinal tract, teeth, tonsils and prostate, which had ardent advocates at one time, has lost its place as accredited psychiatric therapy.

Perhaps the most widely used type of therapy in psychiatry at the present time is the so-called shock therapy, which term, in my opinion, was unfortunately adopted. Shock therapy, of course, in one form or another, has been used as psychiatric therapy for many years. One of the earlier forms of therapy that could well be classified as shock therapy was sudden immersion in cold water. The use of chloroform and ether in the treatment of mentally sick patients soon after its advent in medicine could also be classified as some form of shock therapy.

The term shock therapy has come to be popularly applied to three forms of procedure: insulin hypoglycemia, metrazol, and electric convulsive therapies. The first of these to be used was insulin therapy. The effect of hypoglycemia on certain types of mental disturbances was first noted by Sakel, of Vienna, while using insulin in treatment of drug addiction. The first to use insulin in this country was Cameron and Hoskins in the Worcester State Hospital in 1936.

The next type of shock therapy to be introduced was metrazol convulsive shock therapy. This was described by Meduna in 1933.

Electric shock therapy was first introduced in Italy in 1938 and was soon introduced in this country. This is the most recent type and probably the most widely used of any type of shock therapy at the present time.

There is quite a diversity of opinion as to which types of mental illness are best benefited by shock therapy. Neither do we as yet have any concrete evidence as to the degree of permanency of the results of this type of treatment. However, it is the opinion of many that insulin shock therapy is more successful in the treatment of certain types of schizophrenia, while others claim that electric shock is more useful in the treatment of agitated depression, states of excitement, either manic or schizophrenic, and to a lesser extent in the retarded or apathetic states. In some cases the benefit derived from shock therapy is obviously of a temporary nature, while, on the other hand, the benefit derived from electric shock therapy in agitated depression seems to be more lasting, according to some authorities. In many instances the shock therapies have been beneficial in controlling behavior disturbances. This has been a great help in many institutions in many instances during the past few years while there was acute shortage of attendants and nurses. Some authorities are of the opinion that shock therapy causes some patients who have hitherto been inaccessible to psychotherapy to become more cooperative after the use of shock therapy and in many cases the combination of the two methods of treatment—shock and psychotherapy—is now being used. Most authorities agree that practically the only contraindications to shock therapy are osteo-

porosis, cardiovascular renal disease and tuberculosis.

Since the onset of the last war a type of psychiatric therapy has been given wide notoriety both in medical journals and current periodical magazines. This type of therapy is called narco-synthesis. The two drugs most commonly used for this treatment are amytal and pentothal sodium. This form of therapy is a form of hypnotic therapy used in revealing buried memories and conflicts, reliving emotionally traumatic experiences, treatment of mute and catatonic patients.

During the war it is stated that this type of therapy proved very effective in military practice in combat cases of fairly recent origin. Since this type of treatment is of such recent origin it is difficult to predict what place it will take in psychiatric therapy.

Operations on the brains of psychotic patients are not new. It is probably true that many of the prehistoric skulls which have been unearthed show definite evidence that trephining was done with the idea of relieving some form of mental disorder.

Moniz and Lima, of Lisbon, probably performed the first prefrontal lobotomy in 1935. They first injected frontothalmic fibers with alcohol. This procedure proved to be unsuccessful. They later invented a knife by which frontothalmic fibers were cut.

Dr. Walter Freeman was the first in this country to have prefrontal lobotomy performed on a patient in 1936. The technique of the operation varies somewhat from clinic to clinic, as well as the claims of success for this particular type of treatment. Patients who are recommended for this type of treatment are frequently the ones who have failed to respond to other methods of treatment. It seems that the group most prominently mentioned by those who are doing this type of work as receiving this type of treatment are schizophrenics, depression of the involution period and obsessive neurotics.

It has been said that prefrontal lobotomy is an interesting therapeutic endeavor and perhaps should not be condemned too severely until it has a fair trial.

While this paper is supposed to deal entirely with past and present types of psychiatric therapy, I have the feeling that we perhaps are on the threshold of a great era in the treatment of the mentally ill. It is my opinion that when we know more of the glands of internal secretion we will have a better understanding of the causes of mental sickness and its eventual treatment. Therefore, the results of research along the physical as well as along social, environmental, economical, educational and behavior lines should be utilized, so that our knowledge of psychiatry and psychiatric therapy can keep abreast with the magnificent advances being made in other branches of medicine.

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Westbrook Sanatorium.

OBSCURE HEMATEMESIS: GASTROSCOPY, AN AID IN ITS DIAGNOSIS*

CHARLES M. CARAVATI, M.D.,
and
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Studies performed within two to three weeks following massive hemorrhage from the upper G. I. tract fail to show the site of the bleeding in about one-fourth of the cases; and while it is true that 90 per cent of all cases of hematemesis are probably due to peptic ulcer, either gastric, duodenal, or anastomotic, many are not proved by history and x-ray, as they are the acute type and heal rapidly, especially following hemorrhage. If the patient gives a good history of active ulcer symptoms before hemorrhage, and there is cessation of pain after the bleeding, an inferential diagnosis of peptic ulcer is probably justified; but even then the clinician must utilize all available diagnostic methods to focalize the site of the pathological process. In 685 cases of hematemesis seen at the Boston City Hospital[1], 75-80 per cent showed a positive deformity. In 60 cases, or 9 per cent, the etiology was undetermined.

Carefully performed Roentgen ray study of the upper G. I. tract will show the abnormality causing the bleeding in over 80 per cent of the cases if accomplished shortly after or during the hemorrhage. Esophageal ulcer, carcinoma, and varices together with congenitally short esophagus and hiatal hernia, as well as gross gastric ulcers and benign and malignant neoplasms of the stomach, can usually be correctly recognized by appropriate barium studies.

CONDITIONS DEMONSTRABLE BY X-RAY

- Esophagus
  1. Ulcer
  2. Carcinoma
  3. Varices
  4. Congenital short esophagus
- Gastric
  1. Hiatal hernia
  2. Peptic ulcer
  3. Neoplasms
     a. Benign
     b. Malignant
  4. Granulomas

It is the 20 to 25 per cent of patients showing no positive x-ray findings that we want to consider. So-called occult hematemesis and the problem of the site of its origin can best be considered by a simple classification of causes of upper G. I. bleeding, which are not demonstrated by barium studies.

CAUSES OF OBSCURE HEMATEMESIS

- Intra-Gastric
  1. Peptic ulcer
  2. Gastritis
  3. Gastric erosions
  4. Rupture of sclerotic vessels
  5. Post-operative
  6. Polyps
- Extra-Gastric
  1. Esophagus
  2. Portal cirrhosis and thrombosis
  3. Banti's disease
  4. Blood dyscrasias
     a. Purpura
     b. Hypoprothrombinemia
     c. Polycythemia
  5. Other systemic diseases
     a. Toxic
     b. Infectious
     c. Shock
     d. Burns

GASTRIC ULCER: Not all cases are demonstrated by x-ray. It is well to recall that to obtain a diagnostic silhouette, a crater with contained barium must be seen; and often acute and superficial lesions may not be satisfactorily projected. Tanner[2] studied 631 gastric ulcers, 159 of which were diagnosed by gastroscope, when x-ray was negative. Most of these were of the acute and shallow type. This is a larger per cent of cases with negative Roentgen findings than is reported by most other clinics. Rivers and Wilbur[3] have shown that many massive hemorrhages are not due to rupture of a large blood vessel, but the oozing originates from small congested vessels or from buds of vascular granulation tissue.

Case Report: J. B., white male, age 34, with clinical story of peptic ulcer for four weeks, followed by massive hematemesis. A benign, penetrating lesion of the lesser curvature of the stomach was demonstrated on films, and on medical treatment, the lesion disappeared. Four months later, another episode of hematemesis occurred *without* any *subjective* complaint. Gastroscopy, performed as the bleeding about ceased, showed a superficial ulcer of the gas-

*Read before the annual meeting of the Medical Society of Virginia, at Virginia Beach, October 14-16, 1946.

tric mucosa, which was oozing freely, about 2 cm. from healed scar of old ulcer. This may have been the site of the first gastric hemorrhage. This indicates the advisability of gastroscopy in cases of bleeding.

GASTRITIS: There is no constant subjective pattern associated with any type of gastritis. Many cases of asymptomatic hematemesis are caused by erosions associated with gastritis, particularly the hypertrophic type. Massive hemorrhage is seldom caused by superficial gastritis, but it is not uncommon in hypertrophic gastritis. Fatal bleeding from this has been reported by Schindler,[4] by Bockus,[5] by Korbsch,[6] and by Konjetzny.[7]

Piedro de la Vesca[8] endoscoped 177 cases of hematemesis and demonstrated true gastritis as probably the cause of it in 10.6 per cent. Schindler thinks the percentage is greater. Gastroscopy should be performed as early as is practical, so as to visualize the area of bleeding, preferably not over 72 hours following the cessation of bleeding. Even in the presence of a demonstrated duodenal ulcer, particularly if pyloric obstruction is present,[9, 9a] there is often an active concomitant erosive gastritis which may be the source of bleeding. Hemorrhage following gastric surgery is not infrequently due to circumscribed hypertrophic gastric mucosal changes.

Case Report: White male, age 47, had experienced two previous episodes of moderately severe upper G. I. bleeding. Duodenal deformity was said to have been demonstrated previously but was not confirmed by us. The cap appeared normal four days after the cessation of bleeding from this, his third bout of hematemesis. Gastroscopy revealed large, rigid, edematous rugae, which were not flattened by increased air pressure, with cobble-stone-like depressions and several large active erosions, one of which was oozing slightly at the time of the examination. This case represents hematemesis due to hypertrophic gastritis.

RUPTURE OF SCLEROTIC VESSEL: This is indeed a rare cause of gastric hemorrhage; but most clinicians have observed cases of advanced generalized vascular disease that have suffered massive gastrointestinal bleeding, and, therefore, the vascular tree should be investigated in all cases of occult hematemesis. Advanced arteriosclerosis of the medium sized gastric vessels is exceptional, and only a few cases of proven rupture of one have been reported. Recently, Frank[10] reported an unusual patient whose history recorded 15 episodes of gastric bleeding, and, on autopsy, marked sclerosis of submucosal gastric arteries was noted. These patients may have bleeding episodes from adolescence to senescence. Erosions probably occur just over the artery.

POST-OPERATIVE: When bleeding occurs in a patient with previous gastric surgery, gastroscopy should be accomplished as atrophic and hypertrophic gastritis, small marginal ulcers, localized granulations, or even changes in the jejunal stoma may be visualized. Recently, Paulson[11] has called attention to the practicability of visualizing the jejunum with the gastroscope in post-operative, short-circuit operations.

POLYPS: Benign, gastric polyps are often not demonstrable with barium studies of the stomach. They are often small and sessile and may ulcerate, causing massive bleeding. Olson and Heck[12] have emphasized the polypoid changes frequently found in the presence of atrophic gastritis and report the increased frequency of polyps and carcinoma in Addisonian anemia. It is now important to consider the gastric, as well as the hematologic and neurologic, changes in pernicious anemia.

Case Report: A white male, age 23, had a moderately severe episode of asymptomatic hematemesis while he was a patient in the hospital, recovering from a fractured tibia. All studies, including detailed x-ray with special attention to mucosal pattern, disclosed no relevant pathology; but on gastroscopic study, 3 small, sessile polyps, arranged as a rosette, were plainly seen in the gastric antrum, one of which showed a healed hemorrhagic area on the superior surface. A partial gastrectomy confirmed the presence of benign, adenomatous gastric polyps.

Of the extra-gastric causes of hematemesis not commonly demonstrated by x-ray, esophagitis and esophageal peptic ulcer should be mentioned. These are rare conditions, and massive bleeding from them is indeed uncommon; but when bleeding is associated with dysphagia, esophagoscopy and not gastroscopy should be performed.

PORTAL CIRRHOSIS AND THROMBOSIS: About 5 per cent of all cases of hematemesis are due to cirrhosis.[13] Hemorrhage originates in an erosion of an esophageal varix in over 80 per cent of cases. Portal hypertension causes dilatation of radicles of the azygos veins of the caval circulation which anastomose with the coronary veins, and, therefore, any sudden increase in venous pressure, together with

thinning of the esophageal mucosa, will permit rupture. However, it has been shown by Rolleston and McNee[14] that extreme congestion of the upper 1/3 of the stomach is the site of bleeding in some cases, due to portal hypertension and probably, to the coexistent hypoprothrombinemia. Physical study of the patient, with liver function tests and barium visualization of esophagus for varices, should be performed in all suspicious cases, i.e., all cases of hematemesis with negative x-ray. Gastroscopy is contraindicated in the presence of cirrhosis associated with dilated esophageal veins.

BANTI'S DISEASE: When portal hypertension increases sufficiently to cause dilatation of esophageal plexus, hemorrhage may result, just as in hepatic cirrhosis not associated with splenic anemia. This can be excluded as a cause of bleeding by failure to demonstrate leukopenia, anemia, purpura, and distinctive splenomegaly.

BLOOD DYSCRASIAS: In all cases of bleeding from the G. I. tract with obscure etiology, a survey of the hemopoietic system, with bone marrow and capillary permeability studies, should be accomplished.

a. Purpura: The only manifestation of purpura, either thrombocytopenic or non-thrombocytopenic, may be G. I. bleeding.

b. Hypo-prothrombinemia: This is usually the result of hepatic pathology, and it may be the factor responsible for oozing from the gastric mucosa, even in the absence of portal hypertension.

c. Polycythemia vera: Several reported cases have had as complications hematemesis and melena.

OTHER SYSTEMIC DISEASES: Severe toxic states, infectious disorders, shock,[15] and burns may cause erosions or ulcerations of the alimentary mucosa with resulting bleeding. Shrozer and Keen[16] recently reported 9 cases of purpura occurring in 10,000 consecutive cases of malaria. Most of these cases bled from the gastrointestinal tract, and many were thrombocytopenic. We have observed hematemesis occur in a colored male during the sixth bout of pyrexia, associated with therapeutic quartan malaria for C. N. S. syphilis. He had no other bleeding tendencies, and all hematological studies were normal. Only a small per cent of cases of purpura associated with malaria show diminished thrombocytes in the blood, and then, usually only during the acute febrile episodes.

Case Report: A white male, age 43, after having had a febrile illness associated with chill and fever for about ten days, vomited about 400 cc. of coffee-ground material. He had experienced no subjective gastro-intestinal symptoms, and the only significant findings were chills, fever, and leukopenia. Two days after the acute gastric bleeding, plasmodium vivax was found in the peripheral blood, and the following day purpuric spots appeared over most of the skin surface. Blood and bone marrow studies at this time showed only a mild hypochromic anemia with no thrombocytopenia.

CONCLUSIONS

History and x-ray will ascertain the cause of upper G. I. bleeding in 80 per cent of cases. The other 20 per cent require comprehensive physical and laboratory studies, supplemented by endoscopic examinations.

The Roentgen ray remains the most valuable aid in demonstrating the cause of hematemesis, and it should be performed as soon as is practical after the cessation of the bleeding. However, in the obscure cases where contraindications do not exist, gastroscopy should be accomplished promptly.

The use of the gastroscope as an aid in the localization of gastric bleeding is well established. It will more often reveal only negative findings, but it will show the site of the pathology in a sufficiently large number of cases to justify its utilization more often in unexplained upper alimentary tract hemorrhage.

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DISCUSSION

DR. D. COLEMAN BOOKER, Richmond: Dr. Caravati has covered his subject so well and so thoroughly that very little can be added to his observations. As we all know, the flexible gastroscope was first introduced and demonstrated in 1932. Since then its extensive use has demonstrated the feasibility and safety of the endoscopic examination of the stomach.

As Dr. Caravati has pointed out, gastroscopy is not a rival of the X-ray as a diagnostic test, but it is supplemental to the use of the X-ray examination. The X-ray will reveal the cause of upper intestinal bleeding in approximately three-fourths to four-fifths of all cases. In the remaining cases gastroscopy is of very definite aid in establishing the diagnosis in at least one-third of them.

My experience has been somewhat limited in the use of the gastroscope and has been mostly in those cases which were thought to be surgical in nature. Dr. Caravati has stressed the point of early gastroscopic examination following a massive bout of hematemesis, and it is this point I should like to emphasize. The examination should be carried out, preferably, within from twenty-four to forty-eight hours after the cessation of the bleeding. If that is not done the bleeding points are likely to be lost. In the areas of chronic hypertrophic gastritis which are commonly seen along with duodenal ulcer, the bleeding is very superficial, and it must be seen early in order to be found at all. If gastroscopy is not carried out early the bleeding is apt to cease, and if four or five days elapse from the time of cessation of the bleeding it is likely to be missed.

Dr. Caravati has tabulated the other causes of gastric hemorrhage, both intragastric and extragastric, very well; and there is nothing further that I can add to that part of the discussion.

There is a great deal of importance to be attached to the early diagnosis of cancer by the use of the gastroscope. Massive hemorrhage in gastric carcinoma is not too common, but it does occur. Often we see the mild, occult bleeding, which can be determined only by the presence of blood in the stools.

Unfortunately, malignant ulcer in the stomach will show X-ray evidences of definite improvement under medical management, whereas if gastroscopy is carried out routinely in early ulcer and bleeding from the stomach we shall frequently pick up early cancer, and a life can be saved. I have had the opportunity of doing that one time in my short career with the gastroscope; I found one early case of carcinoma which had not been determined by X-ray or other studies.

DR. T. DEWEY DAVIS, Richmond: An important thing that confronts an individual who sees a lot of gastro-intestinal patients is the question of whether he should purchase a gastroscope. From back as far as 1933 and 1934 that question confronted me, and I debated it for a long time. After talking to other men and after reading papers I decided that the gastroscopists were not entirely sure what they were seeing or what to do with what they saw. That led me to the conclusion that for the average individual to purchase this expensive instrument would not only entail a lot of expense but, and I think more important, it would naturally subject him to the temptation to get his money out of the instrument and therefore he would probably gastroscope a good many individuals that did not need this examination. On the basis of these various conclusions, I decided I did not want to purchase a gastroscope.

It is perfectly true that there is a small percentage of lesions in the diagnosis of which the gastroscope will definitely help. In the great majority the X-ray and other means we have will answer the question. Therefore, my plea is this. Let's have a few individuals scattered around who are experts with this instrument, and not have a lot of men using it who do not know what they are seeing. My friend, Dr. Caravati, is one of those who knows what he is doing, and therefore I am not going to purchase an instrument, and I ask you to think twice before you do it.

ACANTHOSIS NIGRICANS—A CASE OF THE BENIGN TYPE IN AN EIGHT-YEAR-OLD GIRL*

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Acanthosis nigricans has been the subject of numerous reports and reviews[1] since its first independent descriptions by Pollitzer and Janovsky in 1890. Curth's recent review[2] has contributed greatly to a better understanding of the nature of the disease.

Over 400 cases of this unusual cutaneous disorder have been reported, and it is likely that a number of cases have been overlooked, particularly ones in which the eruption is associated with a malignant growth, the significance of which overshadows the changes in the skin.

Acanthosis nigricans is characterized by hyperpigmented patches varying from yellow to black, usually symmetrically distributed in the natural folds of the skin. There is exaggeration of the normal cutaneous markings with hyperkeratosis, and verrucous and papillomatous changes.

Cancer has been found in about 50 per cent[2] of all patients with acanthosis nigricans, usually in older individuals. This phenomenon has led to a classification of the disease based upon the age of the patient, and the presence or absence of malignant disease, giving rise to such terms as "juvenile", "adult", and "benign", and "malignant" forms of acanthosis nigricans.

Histologically, both types present the same characteristic picture. The changes in the skin, according to Montgomery and O'Leary[3] are: relative and absolute hyperkeratosis; decided irregular acanthosis with adjacent areas of atrophy of the malphigian layer; elongated, narrow, papillary bodies; dense melanotic pigmentation of the basal cells of the epidermis; a few chromatophores laden with pigment, which are chiefly limited to the papillary bodies; and, usually, absence of inflammatory reaction in the cutis.

Although the cause of acanthosis nigricans remains obscure, it has been reported in association with a number of conditions affecting directly or indirectly, the chromaffin and sympathetic systems[4]. Among the factors supposedly related to the cause are metabolic disturbances, toxins, endocrine diseases, inflammatory and traumatic conditions of the stomach and chromaffin system, congenital abnormalities, hereditary factors, tuberculosis, and syphilis.

The following case of acanthosis nigricans, unassociated with malignancy, is reported because of the unusual nature and rarity of the disease, and to emphasize the features of a cutaneous disorder, the presence of which may often be of assistance in the diagnosis of internal cancer.

REPORT OF A CASE

An eight year old colored girl was admitted on the dermatologic service of the University of Virginia Hospital on July 23, 1942, complaining of a skin eruption of eighteen months duration.

History.—The family history revealed cancer of undisclosed site in a grand-parent. In December, 1940, the patient had a febrile illness diagnosed scarlet fever, complicated by pneumonia. During convalescence it was noticed that the skin of the face was becoming darker and rougher, with eventual progression of the eruption to the trunk and extremities. Dark, warty, growths appeared on the neck, in the axillas, and about the external genitals, with accompanying generalized thickening, dryness and roughness of the skin. The appearance of the lesions was not accompanied by fever, weight loss,

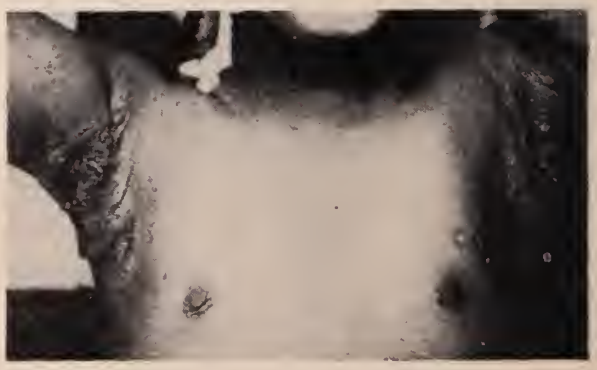


Figure 1. Axillary lesions of acanthosis nigricans, showing hyperpigmentation and verrucous changes.

*From the Department of Dermatology and Syphilology, University of Virginia.



Figure 2. Photomicrograph of skin from posterior cervical region showing characteristic structure of acanthosis nigricans.

malaise, weakness or local discomfort. The eruption persisted until admission.

Examination.—The patient was well developed and nourished, and in no discomfort. There was generalized thickening of the skin of the body, with accentuation of the natural folds. Both sides of the neck, and the axillary, inguinal, perianal, ischial and popliteal regions showed hyperpigmentation. In these areas there was a velvety appearance of the skin due to numerous tiny, verrucous lesions which were arranged closely together, and aggregated into plaques. The general physical examination showed nothing remarkable. The liver and spleen were not palpable. There were no abdominal masses. The external genitals were normal except for the skin changes. Rectal and pelvic examinations were not performed.

Routine laboratory studies disclosed no abnormalities. A Robinson-Power-Kepler test[5] for adrenal cortical insufficiency was within normal limits, i.e., each hourly urine specimen obtained during the morning was of greater volume than the total volume of urine voided during the night. Roentgenograms of the chest, and of the gastro-intestinal tract after a barium meal, were normal.

Course.—The child remained comfortable throughout her stay. A biopsy of the skin of the posterior cervical region was performed July 31, 1942. The skin eruption was not treated.

Histologic Examinations.—Sections of the skin showed the characteristics of acanthosis nigricans. There was decided hyperkeratosis with patches of parakeratosis. An irregular acanthosis with many



Figure 3. Enlargement of portion of section shown in Figure 2. Hyperkeratosis, acanthosis, and pigmentation are prominent.

finger-like cones was present, although most of the rete layer was relatively thin and atrophic. The depressions between the epidermal projections were filled with keratin. There was dense melanin pig-

mentation in the basal cells. The few long, narrow papillary bodies contained occasional pigment-laden chromatophores. The only change in the cutis was slight perivascular infiltration with lymphocytes.

Further Course.—The patient moved out of the state soon after discharge from the hospital, and follow-up studies have not been possible. Through correspondence with the family it has been learned that the child was living and well in January, 1946, five years after onset of the eruption, at which time the cutaneous lesions were still present, and essentially unchanged.

COMMENT

Cases of acanthosis nigricans have been reported from all parts of the world. Most reports concern white persons, and occurrence of the disease in negroes appears to be uncommon[2].

Acanthosis nigricans may be confused clinically with Addison's disease, hemachromatosis, and arsenical pigmentation. The clinical and histologic features of these diseases have been described in detail by Montgomery and O'Leary[3]. Microscopic study of the skin of patients with acanthosis nigricans will usually establish the diagnosis, since the cutaneous histopathologic picture is characteristic.

Etiologic studies have yielded nothing conclusive. Curth[4c] has found among the antecedents of patients with the benign type of acanthosis nigricans, a high incidence of the same types of cancer (i.e., cancer of the glandular organs) that are found in patients of the malignant type. This observation suggests a genetic relationship between acanthosis nigricans and certain types of cancer, and a common origin for both the benign and the malignant types of the disease. Cancer occurred in the family of the subject of this report, although specific details were unobtainable.

There exists a widespread belief that adrenal disease or dysfunction participates in the production of pigmentary changes in acanthosis nigricans. Curth, in a comprehensive review,[2] has considered the existent evidence. This consists of postmortem findings of involvement of the adrenals by metastatic cancer in cases of the so-called malignant type. Since metastasis to the adrenals occurs in only a proportion of these, and not at all in cases unassociated with cancer, it is apparently of no etiologic significance.

In a previously reported case of acanthosis nigricans of the malignant type, Herold and the authors[6] found no evidence of adrenal cortical insufficiency, as determined by a test of urinary sodium chloride excretion.[7]

In the present case, normal adrenal cortical function was demonstrated by means of a test proposed by Robinson, Power, and Kepler[5]. This procedure, devised for the purpose of excluding Addison's disease, is based upon the observation that patients with Addison's disease continue to secrete concentrated urine even after ingestion of water.

The disadvantages of a classification of the disease based upon the age of the patient are apparent. Curth[2] has collected from the literature 22 cases of acanthosis nigricans with associated malignancy in patients less than 32 years of age. One of the cases was 2½ years of age, and one nine years old. A case[6] reported previously from the University of Virginia Hospital concerned a 17 year old girl who also had gastric carcinoma. Since cancer occurs at any age, such terms as "juvenile" and "adult" would seem to be of limited utility.

The qualifying terms "benign" and "malignant" are widely used in denoting the presence or absence of malignancy. Since the cutaneous eruption is identical in both types, it would appear that the terms proposed by Sulzberger and Baer[8]—"acanthosis nigricans with internal cancer", and "acanthosis nigricans without internal cancer"—would be more appropriate.

There are a number of internal diseases with accompanying cutaneous signs of diagnostic importance. In only a few of these, however, do the skin changes have the specificity of acanthosis nigricans. The presence of cutaneous lesions of acanthosis nigricans in any patient, regardless of age, makes it necessary to undertake an exhaustive search for a concurrent malignant condition.

SUMMARY

A case of acanthosis nigricans without internal cancer in an 8 year old girl is reported.

No abnormality of adrenal cortical function was demonstrated.

The diagnostic importance of the disease with reference to internal cancer is emphasized.

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Postage Stamp Commemorating A.M.A. Centennial.

Postmaster General Robert E. Hannegan has approved the issuance of a commemorative postage stamp honoring the doctors of America.

The special stamp will be of the three-cent variety and will be placed on sale on June 9 on the occasion of the 100th anniversary of the founding of the American Medical Association.

"In so honoring the American doctor," Mr. Hannegan said, "we are paying tribute to the men and women of medicine who devote their lives to the cause of humanity. Alleviation of pain and suffering and the betterment of mankind is their creed. The contribution which they have made to our national life is one of which all Americans can be proud and grateful."

Details as to the place of sale and description of the stamp will be announced later.

Some Interesting Hospital Figures.

During 1946 one patient was admitted to a hospital in the continental United States every two seconds and a live baby was born in a hospital approximately every 15 seconds, according to the 26th annual report of the Council on Medical Education and Hospitals of the American Medical Association.

F. H. Arestad, M.D., and M. G. Westmoreland, M.D., present the council report in the April 12 issue of *The Journal of the American Medical Association.* Their figures reveal that in comparison with 1945 the number of hospital beds has decreased from 1,738,944 to 1,468,714, the number of admissions from 16,257,402 to 15,153,452 and the number of patient days from 512,915,155 to 452,-400,710. However, a total of 2,136,373 births were reported for 1946 as compared with 1,969,667 in 1945. This is the first year that hospital births in the United States have reached the two million mark.

TODAY'S CHALLENGE*

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The subject which I should like to discuss briefly is one which vitally concerns each of us and every other person engaged in the practice of a health service profession, whether he is a physician, pharmacist or dentist. In another way, and perhaps even more vitally, the matter is of interest to the public generally. This subject is the future provision of adequate and efficient medical care.

The face of medical practice—and I use this term in the broad sense, to include the activities of all the health service professions—is changing slowly but as inevitably and inexorably as the seasons follow one the other. Medical practice is changing its complexion in all its aspects—scientific, economic and ethical. Some of these changes are in their details typical of our calling, but their basic substance is of the same cloth as the mutations which characterize the present fluid state of our entire social order. Change is the order of the day, and it is as true of our professional activities, as it is of protoplasm, that failure to make the necessary adaptations to environmental changes can result only in extinction.

What are these changes? There are many, but at the root of things there seems to be a common denominator, and that is the maturing conviction, as widespread as it is deep, that the rights of man as such are greater than the rights of any and all special groups. There is a growing lack of patience with groups which think first of themselves and then of the general public. This lack of patience bids fair to rise to a fury which will sweep aside or crush those who preferentially serve special interests rather than the public welfare. Unselfish service is the only answer to the challenge presented by this situation.

So much for the generalities of the situation. What are some of the specific problems which confront us as members of the health service professions? Perhaps the most pressing is the need for provision of a plan which will make adequate medical care available to all of our citizens.

This is a problem which has been blindly refused any real recognition by the organizations of our several professions until quite recently, and it is to our everlasting shame that the health service professions did not make any real, concerted and determined approach to the problem until a plan which was acutely distasteful to organized medicine was introduced into Congress. Unless something is done quickly, some kind of plan will issue from Washington without our help. It is not to be expected that those who have shown indifference to the disease will receive much recognition in the development of a cure.

It is a mystery of mysteries when those who are charged with the care of the sick do not recognize the danger inherent in medical care which is so expensive that, as General Hawley has recently said, it must necessarily be classified among the luxuries by large segments of our population. Something is indeed wrong when a man who has labored long and well to the age of sixty and achieved relative success and security can be forced to the point of bankruptcy by the expenses of one major illness.

Just as the developing public awareness of our obligations to society presents what might be called a problem in external relations, the rapid advances of the medical sciences are presenting internal problems—problems which must be faced within each and among the several health service professions. Today the laboratories are presenting us with powerful new drugs which for the first time are raising rational therapeutics on a broad scale above the level of a fond hope. Today as never before our therapeutic armamentarium is approaching realization of the visions seen by Ehrlich and the other pioneers in chemotherapy.

Over-night we are witnessing the reversal of a classical situation. Where once the average physician stood capable of diagnosing diseases for which there was no specific treatment, the same physician now stands armed with his old knowledge plus powerful and specific medicaments. But here, as often happens, the solution of an old problem has raised a new one. Our powerful and specific new drugs possess not only vast potentialities for good but also

*Prepared for presentation before the Bedford Medical Society, Bedford, Virginia, October 18, 1946.

great potentialities for harm if they are not used with the requisite knowledge and care.

Perhaps the situation with respect to thiouracil will serve to illustrate the nature of one problem which has grown out of our advancing knowledge. Thiouracil, as you know, is the new compound which has the ability to lower the metabolic rate by suppressing the production of thyroxine by the thyroid gland. Because of this action thiouracil is medically useful in hyperthyroidism. Unfortunately, however, thiouracil also has the ability to produce agranulocytosis. This action is so unpredictable and serious that outstanding authorities have indicated that every patient who takes the compound should have ever before him the warning that he should again see his physician at the first sign of infection. Acting upon this expert advice from medical men of national repute, the Food and Drug Administration has pointed out the legal requirement that finished thiouracil prescriptions must bear on their labelling such warnings as may be necessary for the protection of the patient, whether or not the physician so directs. Here, indeed, is a new development. Through the centuries the right of determining what shall appear on the labelling of a prescription has been deemed to be the prerogative of the prescriber. Now, however, the development of a valuable yet potentially harmful compound makes it legally necessary for the pharmacist to place a warning on prescriptions containing the drug even in the absence of authorization from the prescriber.

Fear has been expressed that this will disturb the smooth interprofessional relationships which exist among pharmaceutical and medical practitioners. For my own part I cannot believe that any considerable number of well-informed physicians will take offense because pharmacists follow a course which is demanded by both the welfare of the patient and by Federal law. The very existence of this society, in which membership is shared by physicians, pharmacists and dentists alike, lends weight to my conviction. Nevertheless, here is an illustration of the type of change which scientific advancement must bring about again and again in the ethical aspects of pharmaceutical and medical practice and to which we must adapt our thinking if we are to utilize these advances efficiently. Doubtless this change will be regarded by some as a loss of authority on the part of the physician. However, if the net result is greater protection of the public health, then who can legitimately take offense?

The two problems which we have been considering—that of meeting the need for a wider distribution of medical care and that of adjusting our thinking to the changes which must necessarily accompany efficient medical service—are not to be dismissed as too easily soluble. However, my deepest conviction is that there is a philosophy the adoption of which will do much to tear down obstacles to their solution. This is the philosophy which holds that all other considerations are subordinate to the needs of the public. We must not lose sight of the fact that we as practitioners of the health service professions exist purely and simply for the good we can do for others. We owe our first allegiance to the public and not to our professions, however great their traditions may be.

If we can wholeheartedly accept the premise that every doubt must be resolved in favor of the public health, then the details of fitting our services into the changing patterns of the future can be worked out among ourselves in orderly fashion. If we fail to accept this fundamental premise and continue to wrangle among ourselves, then our place in the future will be determined by others.

We must accept the challenge, and we must not fail!

ELECTROCARDIOGRAPHIC CHANGES OCCURRING DURING ANTIMONY THERAPY

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and
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Abnormal electrocardiographic changes were noted by Mainzer and Krause[1] in seven patients receiving intravenous injections of tartar emetic for schistosomiasis. Five other patients treated in a similar manner for the same disease showed no such abnormalities. The abnormalities found were chiefly flattening or inversion of the T waves in Leads I, II and III, which were thought by the author to be due to the toxic action of the drug on the myocardium. They observed that the electrocardiographic changes disappeared promptly after discontinuing the drug. None of the twelve patients showed any clinical signs of systemic toxicity or cardiovascular disturbance.

These authors state that sudden death has been observed occasionally in patients receiving antimony therapy (tartar emetic or fuadin). In each instance death was abrupt and unexpected and the patient had appeared in a good general condition prior to the injection. Although no clinical or electrocardiographic studies were recorded at the time of death, the authors felt that sudden ventricular fibrillation due to the toxic action of the drug, was probably the cause. Since death occurred usually two to six hours after the administration of the drug, it was held unlikely that the speed of injection or any anaphylactic reaction could be the cause; or that sufficient time had elapsed for damage to the liver or kidneys to have been a factor.

Eight patients infested with Schistosoma mansoni were treated by us in a United States General Hospital located in Italy. All of these patients were soldiers in the Brazilian Army and, since all eight at the time of hospitalization had recently arrived in this theatre, it was considered probable that they had become infested in Brazil. In only two patients was the disease suspected at the time of hospitalization. In the remaining six cases the ova of Schistosoma mansoni were found on routine stool cultures in soldiers suffering from epidemic parotitis or acute nasopharyngitis.

Two of the patients (CASES 1 and 2) were not studied with electrocardiograms. After stool examinations showed the ova of Schistosoma mansoni, they were treated with fuadin and received a total dose of forty cc. by intramuscular injection. Then, after negative stool reports, they were discharged to duty apparently cured and having suffered no complaint referable to the cardiovascular system.

Two other patients (CASES 3 and 4) likewise received forty cc. of fuadin by intramuscular injection and had electrocardiograms made sixteen days after the last dose of the drug. In each instance the electrocardiogram was within normal limits, and there were no symptoms or objective findings suggesting impairment of the cardiovascular system.

The remaining cases showed abnormalities in the electrocardiograms and are reported in detail:

CASE 5: J. S., white male, age 23 years, was admitted to the hospital March 26, 1945, complaining of chilliness, fever, nausea, headache and alternating constipation and diarrhea. A general physical examination was negative and routine studies of the blood and urine were normal. Numerous small grayish ulcers were noted on sigmoidoscopic examination. The ova of Necator americanus and Schistosoma mansoni were found in stool. Treatment was begun first with hexylresorcinol and tetrachlorethylene and then with fuadin. Forty-five cc. of the latter drug were administered by intramuscular injection over a period from April 13, 1945, to April 28, 1945.

Cardiovascular: There were no symptoms referable to the cardiovascular system during the period of hospitalization and an examination of the heart showed the blood pressure 104 systolic and 82 diastolic, the pulse rate 80/min., the rhythm regular and the tones of normal quality. An electrocardiogram made on April 23, 1945 (Fig. 1), showed inverted T waves in Leads II and III, and low

(1) Mainzer, F., and Krause, M.: Changes of Electrocardiogram Appearing during Antimony Treatment. Trans. Roy. Soc. Med. Hyg. **33**:405, 1940.

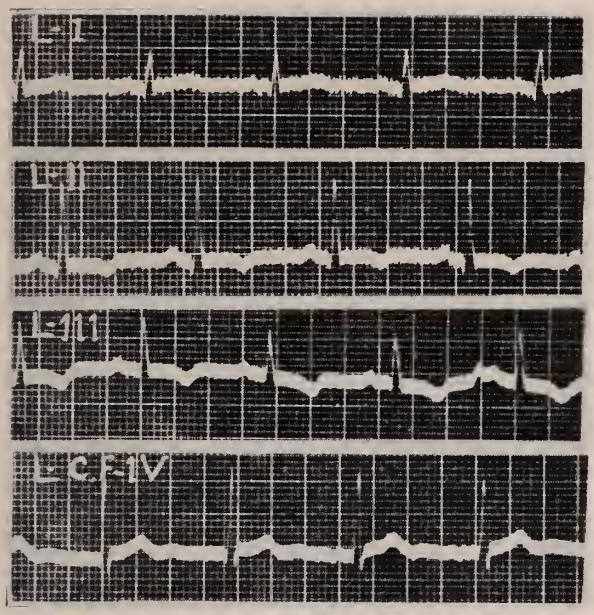


Fig. 1. Case 5, April 23, 1945.

T waves in Lead CF IV. The electrocardiogram taken May 8, 1945 (Fig. 2), ten days after fuadin was discontinued, was within normal limits.

CASE 6: R. S., white male, age 18 years, was hospitalized March 7, 1945, with epidemic parotitis. A general physical examination was negative except for the bilateral enlargement of the parotid glands and the routine laboratory studies were normal. The ova of Schistosoma mansoni, Necator americanus, and Ascaris lumbricoides were found in the stool. Initial treatment was with hexylresorcinol and tetrachlorethylene. Following this forty cc. of fuadin was given by intramuscular injection in divided doses over the period from March 30, 1945, to April 14, 1945. Since the stool specimens still contained the ova of Schistosoma mansoni, a second course of fuadin was begun and twenty-five cc. of the drug was administered between April 27, 1945, and May 2, 1945.

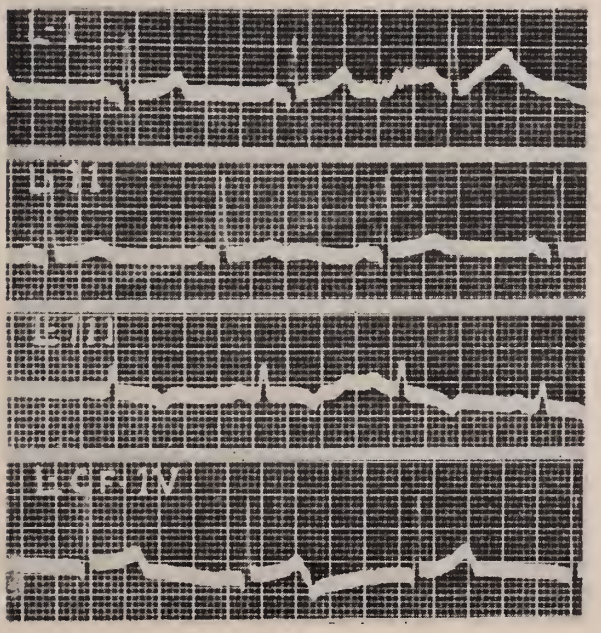


Fig. 2. Case 5, May 8, 1945.

Cardiovascular: At the time of admission to the hospital there were no symptoms referable to the cardiovascular system and examination of the heart showed the blood pressure 110 systolic and 68 diastolic, the pulse rate 76/min., the rhythm regular, the tones normal and no pathologic murmurs. At no time during his hospitalization did he present systems or clinical signs of damage to the heart or circulatory apparatus. On April 30, 1945, three days after beginning the second course of fuadin, an electrocardiogram (Fig. 3) showed

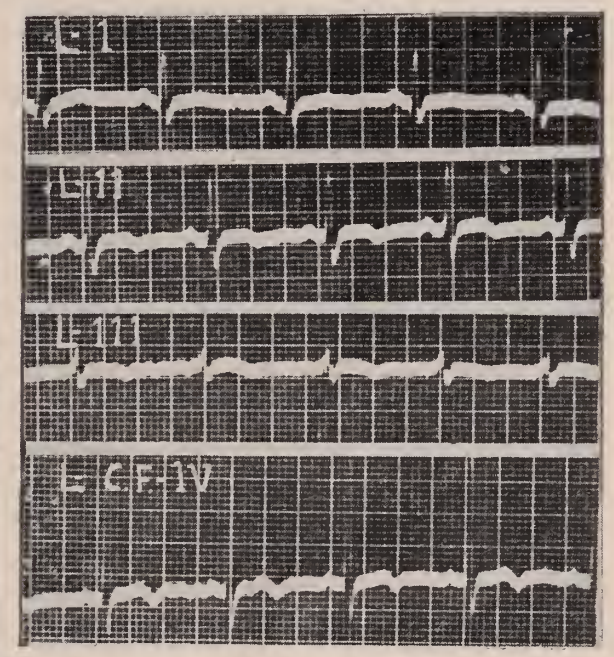


Fig. 3. Case 6, April 30, 1945.

low T waves in Lead I and inverted T waves in Leads II, III and CF IV. Drug therapy was discontinued May 2, 1945, because of these findings and an electrocardiogram (Fig. 4) made on May 8, 1945, showed improvement with the T waves now being normal in Lead I, upright but low in Leads

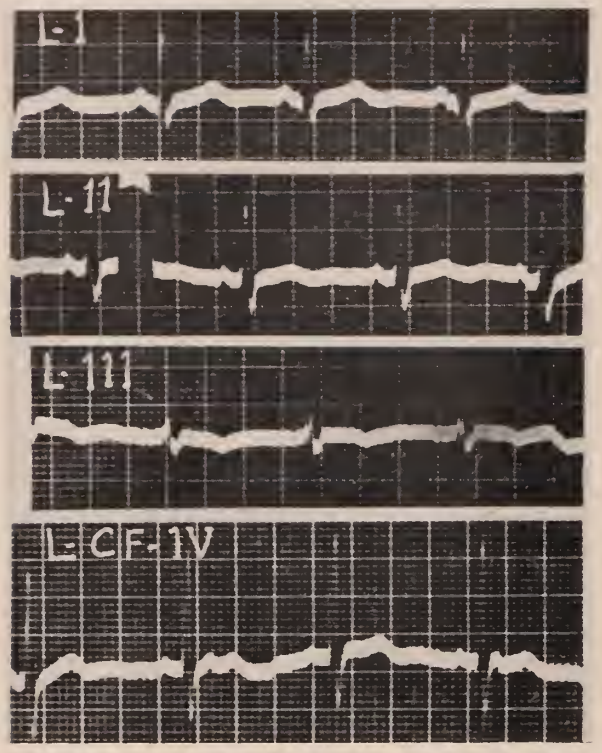


Fig. 4. Case 6, May 8, 1945.

regular and the tones of normal quality with no pathologic murmurs. An electrocardiogram (Fig. 5)

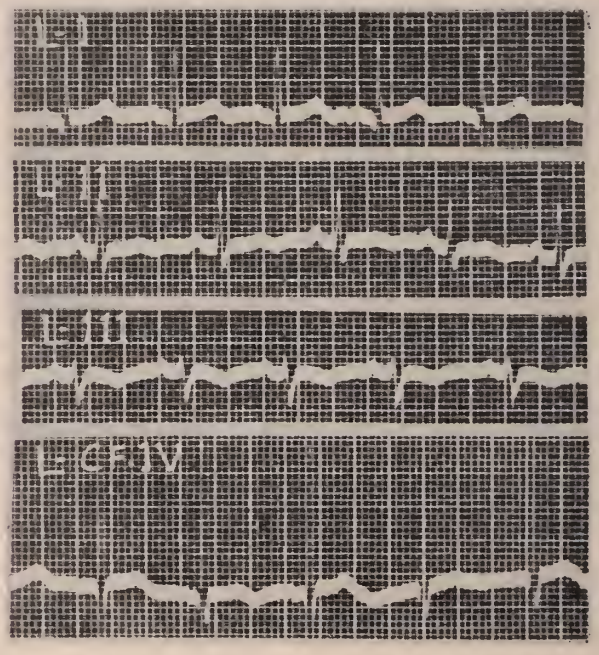


Fig. 5. Case 7, May 11, 1945.

II and CF IV, and still inverted in Lead III. This patient was sent back to Brazil before further tracings could be obtained, but it is our belief that this electrocardiogram would have returned to normal.

CASE 7: S. S., white male, age 27 years, was hospitalized April 15, 1945, with a history of abdominal pain, nausea, vomiting and fever of two weeks' duration. A general physical examination was negative except for a slight enlargement of the liver to two fingers' breadth below the right costal margin. Routine studies of the blood and urine were normal. The ova of Schistosoma mansoni and Necator americanus were present in the stools. Treatment with fuadin was begun on May 9, 1945, and between this date and May 17, 1945, he received twenty-five cc. of the drug by intramuscular injection. His symptoms subsided, the liver assumed its normal size, and the ova of Schistosoma disappeared from the stools.

Cardiovascular: During the period of hospitalization the patient presented no symptoms referable to the cardiovascular system and examination of the heart showed the blood pressure to be 120 systolic and 64 diastolic, the pulse rate 80/min., the rhythm

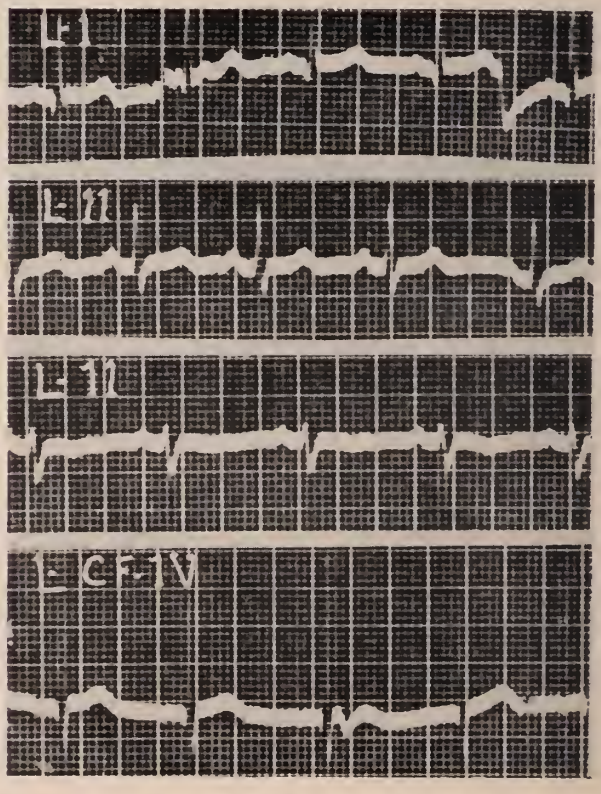


Fig. 6. Case 7, May 25, 1945.

made on May 11, 1945, showed low T waves in Leads II and CF IV and an inverted T wave in Lead III. On May 25, 1945, eight days after discontinuing treatment, an electrocardiogram (Fig. 6) showed a normal configuration.

CASE 8: R. O. B., a white male, age 23 years, was admitted to the hospital March 28, 1945, because of an acute nasopharyngitis. A general physical examination was negative. Numerous small, irregular, grayish ulcers were noted on a sigmoidoscopic study. Routine tests made on the blood and urine were normal. The ova of Schistosoma mansoni, Ascaris lumbricoides, Necator americanus and cysts of endameba histolytica were present in the stools. After treatment with hexylresorcinol, emetine, and carbarsone, a course of fuadin was started. Between May 31, 1945, and June 5, 1945, he received twenty cc. of this drug by intramuscular injection, but was returned to Brazil before a complete course of the drug could be given.

Cardiovascular: Examination of the heart at the time of admission showed the blood pressure to be 108 systolic and 66 diastolic, the pulse rate 80/min., the rhythm regular and the heart tones of normal quality without pathologic murmurs. During the period of hospitalization there were no complaints referable to the cardiovascular system. An electrocardiogram made on May 15, 1945 (Fig. 7), prior to beginning treatment with fuadin was within normal limits. On June 2, 1945, after receiving ten cc. of the drug, an electrocardiogram (Fig. 8) showed

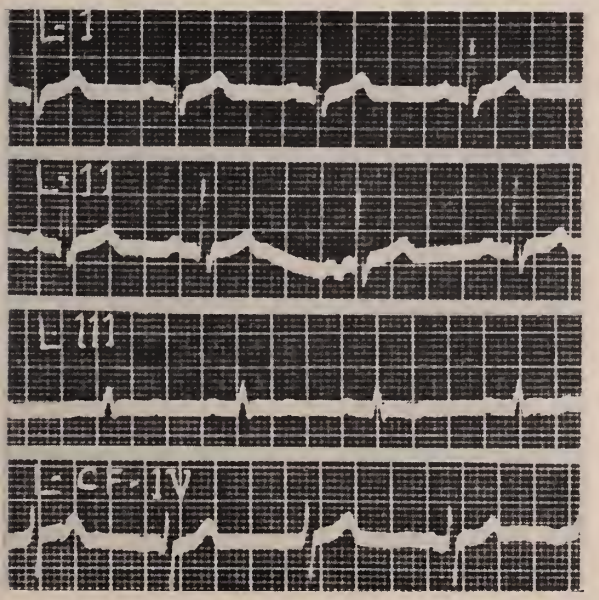


Fig. 7. Case 8, May 15, 1945.

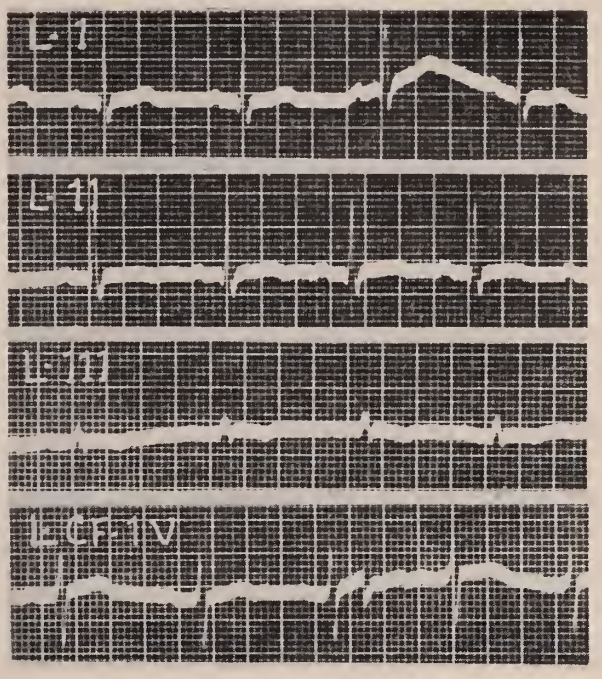


Fig. 8. Case 8, June 2, 1945.

flattened T waves in Lead II and CF IV and inverted T waves in Lead III.

DISCUSSION

We are reporting four cases which demonstrated slight but definite electrocardiographic changes during the course of treatment with fuadin (sodium antimony biscatechetical disulphonate). This observation has been reported previously[1] as had the occurrence of sudden death in the course of treatment with this drug. In none of the cases of this series was there clinical evidence of myocardial damage. In two cases the electrocardiogram returned to normal after the drug was discontinued; in a third the tracing showed definite improvement at the time of the patient's transfer; and in the fourth the patient was evacuated during the course of treatment. In the absence of symptoms and objective signs of cardiovascular disturbance we, at first, felt that these changes were of no clinical significance. However, after having been informed of the experiences of Mainzer and Krause, we realize that these drugs are capable of producing fatal toxic reactions and this fact must be borne in mind with every patient under treatment with one of the antimony compounds. We feel that electrocardiographic studies

are of decided help in evaluating the toxic reaction on the myocardium and advise that tracings be made as often as is indicated or is practicable. Realizing the serious consequences of untreated schistosomiasis and the value of fuadin in its therapy, we are unable, with this small data, to establish a criteria for discontinuing treatment. Further critical study will be useful in this respect.

SUMMARY

(1) Abnormal electrocardiographic changes occurred in four patients during or immediately following treatment with fuadin. These changes consisted of the inversion or flattening of the T waves in Leads II, III or CF IV.

(2) All tracings returned to or showed evidence of returning to normal after discontinuing the drug.

(3) None of the patients showed clinical evidence of myocardial damage.

(4) In view of the serious consequences of untreated schistosomiasis it would appear unwise to withhold therapy in the face of minor electrocardiographic changes.

Peroneal Palsy Caused by Crossing the Legs.

If you are a tall, thin and longlegged man and have the habit of crossing your legs, watch out, warn two army doctors, because you are prone to develop partial paralysis as a result of this habit.

Writing in the March 15 issue of *The Journal of the American Medical Association*, the physicians —Capt. Simon H. Nagler and Capt. Leo Rangell— state that peroneal palsy, partial paralysis of the muscles supplied by the peroneal nerve in the calf muscles, may result from any occupation that requires crouching, squatting or kneeling because it exposes the nerve to injury, both of the pressure and tension variety.

The eight patients seen by the physicians had the habit of crossing their legs. Five of these were air crew technicians of various kinds, whose work took them into the cramped quarters of planes, where tall long-legged persons must assume awkward positions. Thus, the nerve suffered additional injury because it is superficial near the knee where the tension was sustained.

One of these patients was a radio mechanic and operator who sat with legs crossed, the right knee uppermost and wedged beneath the table top, while sending and receiving code. Prior to his admission to the hospital he had been sitting in this position when he noticed that the top of his right foot up to the ankle "went to sleep." When he stamped about to "awaken" his foot, he first noted that he was unable to raise it.

The authors' comment on this patient is that for years the nerve had been injured by his habit of sitting with legs crossed, but a warning tingling sensation had prevented prolonged pressure. "Under the stress of military activity," they state, "this signal of alarm had been ignored, resulting in the more damaging compression. Moreover, additional traumatizing pressure was produced by wedging the crossed legs beneath a table top."

They add that "evaluation of our cases clearly demonstrates that the most important predisposing factor for development of palsy in those who habitually cross their legs is the build of body. It is the tall, long-legged person who is prone to have palsy due to crossing the legs. Our patients were tall, relatively thin and long-legged men, with an average height of 5 feet 11½ inches."

In civilian occupations, this condition has been known to occur commonly in miners, agriculturists and coal pickers, according to the army doctors.

Treatment begins with making the patient conscious of the bad effect which crossing the legs produces. Mechanical support of the foot, radiant heat, electricity, and adequate nutrition with large doses of thiamine chloride, a component of vitamin B complex, also are utilized. The therapeutic results were good in these patients.

PRIMARY CANCER OF THE LUNG*

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A histological diagnosis of primary cancer of the lung was made in 88 consecutive cases during the past 8 years. This material was collected from a series of private patients and from a group of patients referred to an Army Thoracic Surgery Center during the war. A clinical diagnosis of cancer of the lung has been made in an additional 19 cases; however, circumstances precluded pursuing these cases to a morphologic answer and they are excluded from this study.

Cancer of the lung has shown both a relative and absolute increase in incidence. Its frequency, compared with all other cancer, is between 8 and 10 per cent.

Males are more prone to develop cancer of the lung than females, the ratio being nine to one. Age susceptibility is greatest between 50 and 60 years, and parallels the age susceptibility for cancer in general (Table 1). The youngest and oldest patients

TABLE 1—AGE AND SEX DISTRIBUTION
CARCINOMA OF THE LUNG

Males—79	Females—9
AGE, YEARS	CASES
17-29	2
30-39	3
40-49	20
50-59	47
60-Up	16

were 17 years and 79 years of age, respectively. The lesion was on the right side in 45, left side in 42, and in one case the lesion involved the bifurcation of the trachea and preponderance favorable to one or the other side could not be determined by the bronchoscopic examination (Table 2).

SYMPTOMATOLOGY AND DIAGNOSIS

The average duration of symptoms prior to the establishment of a clinical diagnosis of cancer of the lung was 6 months. Delay in diagnosis cannot be attributed entirely to the patient's negligence in seeking relief. Sixty per cent of the patients consulted a physician one to two months after the onset of symptoms. Twenty-one per cent were not alarmed by their symptoms and waited 3 to 4 months. Nineteen per cent were either accidentally discovered to have cancer of the lung or had suffered from their symptoms for a period of from 4 to 9 months prior to seeking medical advice. The majority of these cases sought relief soon after the onset of symptoms. In many cases the physician failed to seriously consider the presence of cancer and treatment was erroneously directed to an intercostal neuralgia, unresolved pneumonia, pleurisy, influenza, tuberculosis or chronic bronchitis. In 2 cases metastasis to the brain so over-shadowed all other symptoms that a craniotomy was performed for a primary brain tumor. During the past several years, neurosurgical clinics have recognized this possibility in patients over 40 years of age suspected of having a brain tumor and a roentgenogram of the chest has been added to this age group's clinical study. Two cases were entirely asymptomatic. One died of generalized carcinomatasis of the abdomen and autopsy revealed a one centimeter bronchiogenic carcinoma of the lung. The other patient had an early small peripheral lesion discovered by chance in a routine fluoroscopic examination.

Cough, pain, sputum, hemoptysis, dyspnea and weight loss were the six most common symptoms encountered in this group of cases (Table 3). The

TABLE 2—ANATOMICAL DISTRIBUTION

	Upper Lobe	Lower Lobe	Lobe Undetermined	Middle Lobe	Total Cases
Rt. Lung	22	18	1	4	45
Lt. Lung	21	19	4	–	42
Carina	—	—	–	–	1

*Read before the annual meeting of the Medical Society of Virginia, at Virginia Beach, October 14-16, 1946.

factor primarily responsible for production of symptoms in cancer of the lung is the encroachment of

TABLE 3—SYMPTOMATOLOGY IN 88 CASES

	CASES	PER CENT
Cough	76	86
Pain	60	68
Sputum	58	66
Hemoptysis	50	57
Dyspnea	41	47
Weight Loss	29	33
Tenderness (Palpation)	14	16

the tumor upon the wall or lumen of a bronchus. This results in varying degrees of obstruction and ulceration of this structure.

Seventy-six patients (86 per cent) exhibited cough as the initial symptom which persisted throughout their illness, although it changed in character. In spite of the prevalence of a so-called "cigarette cough" and post-nasal drip cough, these patients on close questioning were aware of departure from the customary cough. The initial cough is dry and expulsive efforts are ineffective, for the encroachment of the tumor upon a bronchus does not yield to this physiological mechanism of clearing the airway. The stimulus persists, and bronchial secretions are poured out in an attempt to rid the bronchus of the irritant. The cough at this stage is productive of a thin mucoid sputum. The tumor encroaches further upon the bronchus and partial or complete obstruction of this structure leads to local and distal infection in the lung. A purulent sputum is associated with the cough at this stage. Sputum was present in 58 cases (66 per cent). It was mucoid in 28 and purulent in 30 cases.

Pain or chest discomfort was present in 60 cases (68 per cent) and varied in intensity from a "heavy feeling" in the chest to that of severe and intractable pain associated with osseous and brachial plexus extension of the cancer. The pain may be fleeting in character but it shows a tendency to persist and reoccur. This type of pain leads to a frequent diagnosis of pleurisy and such is the likely explanation; however, the possibility of cancer cannot be dismissed in patients over 40 years of age.

Hemoptysis indicates ulceration of the tumor or bronchial mucosa in cancer of the lung. The higher the degree of bronchial obstruction, the greater the incidence of blood spitting; therefore, hemoptysis cannot be considered an early symptom. It was present in 50 cases (57 per cent). This symptom rightfully disturbs the patient and it should initiate a thorough study of the chest to exclude cancer of this region. Massive pulmonary hemorrhages are extremely rare until late in the disease and the usual finding is a blood streaked sputum.

Dyspnea was present in 41 patients (47 per cent). It seemed to parallel the extent of interference with functional lung volume. Pleural effusion was of a sufficient degree in 14 cases to account for this symptom. Lobar atelectasis, associated infection and paralysis of the diaphragm are other factors leading to dyspnea. Although weight loss is not suggestive of any particular disease, it was recorded in 29 cases. Tenderness to palpation was present in 14 cases. This objective finding was present in the 6 cases with extension of the cancer to the bony thorax and in each instance the rib involved could be identified.

Cancer of the lung masquerades as pulmonary infections (Table 4). The sputum was purulent in

TABLE 4—FACTORS INDICATING ASSOCIATED INFECTION

	CASES	PER CENT
Purulent Sputum	30	34
Lung Abscess	15	17
Pneumonitis	12	14
Empyema	2	2.3

30 cases (34 per cent). Lung abscesses were present in 15 cases (17 per cent). Cancer of the lung must be suspected in all patients with a lung abscess beyond 40 years of age. Pneumonitis unrelated to abscess formation was primarily either of the so-called "unresolved type" or virus type in 12 additional cases. In the cancer age group delayed resolution of a pneumonitis must be viewed with suspicion of a lung tumor. Two patients were admitted with total putrid empyemas and the diagnosis in each instance was delayed beyond the hope of a surgical cure.

Pleural effusions associated with cancer of the lung are usually bloody and indicate tumor extension to the pleurae. This is a late sign of lung cancer and in no instance in this group (14 cases) was therapy of avail. Metastasis to the supraclavicular nodes or other extrathoracic nodal extension, liver metastasis, cerebral metastasis, and involvement of the recurrent laryngeal nerve, sympathetic trunk, phrenic nerve, and brachial plexus indicate a situation which has become hopeless.

Frequently, the history and a careful physical examination do not lead to a diagnosis of an existing cancer of the lung. Other methods of diagnosis

available for a complete study and for histological confirmation of the clinical impression include roentgenography, sputum examination, biopsy of suspected lymph node extension, bronchoscopy, thoracentesis, pneumothorax, aspiration biopsy, and biopsy of chest wall and wall of an abscess cavity.

The value of roentgenography cannot be overestimated as a diagnostic method. A diagnosis of primary lung cancer was made or strongly suspected in 80 cases (91 per cent). Three patients were not examined and the diagnosis was established during craniotomy in two and at necropsy in the other. The diagnosis of cancer of the lung was missed in 5 patients (5.7 per cent). In three patients, the lesion was called tuberculosis, in one patient a rib had been partially destroyed and a diagnosis of myeloma was rendered, and in the remaining patient there was an erroneous diagnosis of unresolved pneumonia.

The radiologic features of primary cancer of the lung are the shadow of a peripheral or central tumor mass, localized area of pulmonary emphysema, segmental or lobar atelectasis, broadening of the mediastinum by invasion or metastasis, pleural effusion and bony thorax extension of the tumor.

In this group of cases, the sputum was not examined on any occasion for tumor cells. Recent interest in this method of examination suggests that its accuracy cannot be questioned and that it can assume a practical role in many diagnostic situations. We plan to use this method of diagnosis in the future. Sputum examinations are always made to exclude pulmonary tuberculosis. The bacterial flora is determined in the patients with purulent sputum.

Bronchoscopy is the most outstanding method used in confirming the clinical diagnosis of cancer of the lung. Its value is limited to lesions arising in the major bronchi and to other lesions which encroach upon the larger bronchi. Bronchoscopy was done in 71 cases (81 per cent). It was positive in 43 cases (61 per cent) and negative in 28 cases (39 per cent). This examination was not done in 17 patients (Table 5).

TABLE 5—BRONCHOSCOPIC EXAMINATION IN 71 CASES

	CASES	PER CENT
Positive	43	61
Negative	28	
Not Examined	17	

In addition to its diagnostic value, bronchoscopy plays an important role in determining operability. The extent of the local growth, the nodal involvement at the bifurcation of the trachea, at times paratracheal nodal involvement, and fixation of the mediastinum are obvious to the bronchoscopist. By correlating the bronchoscopic and operative findings, it is now possible for me to exclude certain patients as inoperable who early in this group were subjected to a thoracotomy in hopes of a surgical cure.

The primary reasons for negative findings in 28 cases (39 per cent) of the 71 cases subjected to bronchoscopy are upper lobe and elsewhere peripheral locations of the tumor. The examination was negative in 6 cases with osseous extension of the cancer of the lung to the bony thorax. If the tumor casts a circular shadow in the roentgenogram, rarely will it be seen during bronchoscopy. It is possible to foretell with a fair degree of accuracy by the roentgenogram the likelihood of visualizing the tumor. If the tumor obstructs a major or secondary bronchus and the radiological appearance is that of atelectasis, the tumor can usually be seen with the bronchoscope.

It is useless and uncalled for to subject all patients with a clinical diagnosis of cancer of the lung to bronchoscopy. The reasons for omitting the bronchoscopic examination in 17 cases are obvious (Table 6). There are certain early peripheral

TABLE 6—REASON FOR OMITTING BRONCHOSCOPIC EXAMINATION IN 17 CASES

Extrathoracic Positive Lymph Node Extension	6
Bloody Pleural Effusion With Tumor Cells	2
Metastasis To Brain Proven By Craniotomy	2
Terminal Stage, Cancer, Heart Failure, Liver Extension	7

tumors in which this examination need not be carried out, and clinical experience should take precedence over the routine employment of bronchoscopy in all cancer of the lung.

Examinations of the aspirated fluid in pleural effusions for tumor cells established the diagnosis of cancer of the lung in 3 instances. In 3 cases where lung abscesses were suspected as being secondary to carcinoma of the lung, a biopsy of the wall of the abscess at the time of external drainage confirmed the presence of cancer. Biopsy of extrathoracic lymph node metastasis permitted tissue confirmation of the diagnosis of cancer in 8 cases. Diagnostic pneumothorax will occasionally offer additional information by delineating the tumor mass, masses in the mediastinum and rib involvement;

however, it has not assumed a major role in diagnosis. Visualization of the pleural cavity with the thoracoscope following the institution of a pneumothorax offers at best inadequate examination in determining operability and open thoractomy is preferable. Open thoracotomy confirmed microscopically the clinical diagnosis of cancer of the lung in 13 cases. This procedure is limited to the cases believed to have curable cancer of the lung in which other diagnostic methods have failed to establish the diagnosis.

Lung aspiration with a needle or punch biopsy is reserved for peripheral inoperable tumors. An operable case may be converted to an inoperable one by hemorrhage, infection and seeding of the tumor along the needle tract. This method was used to establish the diagnosis in 4 hopeless cases. Necropsy findings established the first tissue diagnosis of cancer of the lung in 10 cases. Although antemortem diagnosis could have been reached in some of these cases, the terminal stage of the disease precluded efforts in this direction; however, such patients constitute a minority of the group (Table 7).

TABLE 7—METHODS OF DIAGNOSIS 88 CASES
CARCINOMA OF THE LUNG

	CASES
Bronchoscopy	43
Thoracotomy—Exploratory	13
Biopsy Extrathoracic Lymph Node Extension	8
Biopsy Wall Peripheral Lung Abscess	3
Craniotomy—Unsuspected Brain Metastasis	2
Biopsy Chest Wall	2
Punch or Aspiration Biopsy	4
Tumor Cells Pleural Effusion	3
Necropsy	10

TREATMENT

Roentgen therapy and radium have proved disappointing in both a curative and palliative approach to the treatment of primary carcinoma of the lung. They have been abandoned as curative measures. Roentgen therapy is being used as a palliative measure in the highly undifferentiated cell types of primary lung cancer, although in many instances it seems to shorten the expected duration of life. In a few cases beneficial results for a short time seemed worthy of further trial. The only hope of a cure at the present time depends upon surgical extirpation of the lung, regional lymph nodes and adjacent involved structures.

The advanced stage of carcinoma of the lung at the time of diagnosis is reflected in the operability rate. Fifty cases (57 per cent) were inoperable at the time of establishing the diagnosis. Metastasis, extrathoracic extension, intrathoracic extension manifested by pleural effusion and massive infiltration of the mediastinum, and nerve involvement contra-indicated operation in 46 cases. In 4 cases the general condition of the patient contra-indicated operation. In 38 cases (43 per cent), preliminary studies indicated that the lesion was confined to the thorax and probably operable. Upon opening the pleural cavity, the finding of pleural extension, diaphragmatic seeding, invasion of great vessels and pericardium and extensive paratracheal nodal involvement was a too frequent disappointment. It accounted for prompt closure of the thorax in 21 cases (Table 8). Although this group of thoracotomies was unattended by complications, this experience will lead to fewer explorations in inoperable cases and higher resectability rate.

Pulmonary resection was possible in 17 cases yielding an operability rate for the entire group of 19.3 per cent (Table 8). A palliative lobectomy was

TABLE 8—RESULTS IN 88 PROVED CASES

	CASES	PER CENT
Thoracotomy—Considered Operable	38	43
Resection Feasible	17	19.3
Lobectomy—Palliative	2	
Pneumonectomy	15	

carried out for squamous cell carcinoma of the right upper lobe which had invaded the third rib and its respective vertebral transverse process. The second lobectomy was performed for a lung abscess of the middle lobe. Bronchoscopy was negative on two occasions, and the specimen at operation did not reveal carcinoma; however, this patient died after 18 months with squamous cell carcinoma of the right lung. It is reasonable to assume that the lesion was present at the time of the lobectomy for the lung abscess. Fifteen patients were subjected to total pneumonectomy. The removal of the entire lung is in keeping with good cancer surgery, and lobectomy, except under unusual circumstances, does not have an established place in curative surgery of this region. Six of the 17 resected patients did not have a pre-operative microscopic diagnosis of cancer of the lung, emphasizing the difficulties encountered

in diagnosis of favorable operative cases (Table 9).

TABLE 9—METHODS OF CONFIRMING THE CLINICAL DIAGNOSIS IN 17 CASES OF CANCER OF THE LUNG SUBJECTED TO RESECTION

	CASES	PER CENT
Bronchoscopy—Positive	9	53
Bronchoscopy Negative		
Biopsy Wall of Peripheral Lung Abscess		
Positive	2	12
Bronchoscopy Negative		
Exploratory Thoracotomy	6	35

In addition to the chest wall resection accompanying the lobectomy, three patients were subjected to total pneumonectomy and simultaneous block resection of the chest wall for cancer of the lung invading the ribs. A patient with a previously drained lung abscess secondary to primary carcinoma had a pneumonectomy accompanied by block excision of the neighboring thoracic wall. Attention is directed to the type of patients included in the group of 17 resections in that a higher mortality can be expected in such cases.

The 17 resections constitute an operability rate of 19.3 per cent of the 88 histologically proved primary carcinomas of the lung. Three (17.6 per cent), died in the hospital. Four have died since leaving the hospital. One died in 4 months, one died 11 months later, and 2 died 18 months to 2 years following discharge from the hospital. One is living with an apparent recurrence 6 months after operation. Nine patients are living and well. Of these patients, one has been well for more than 6 months, 2 for more than 2 years, 2 for more than 3 years, 2 for more than 4 years, and 2 for more than 6 years (Table 10). One of the patients living and well 7 years after operation had metastasis to a mediastinal node, and the 6 year survival had extensive destruction of the second, third, and fourth ribs at the time of total pneumonectomy and simultaneous block resection of the chest wall. Seven ribs were removed in block with the specimen.

TABLE 10—RESULTS IN RESECTION 17 CASES CARCINOMA OF THE LUNG

	CASES	PER CENT
Resections	17	100
Hospital Deaths	3	17.7
Deaths Later	4	23.5
Living With Recurrence	1	5.9
Living and Well	9	53.0

The hospital death rate (17.6 per cent) is too high. One patient had a post-operative cerebral accident, one died following block excision of 7 ribs and the lung for cancer invading the chest wall, and the remaining case died following total pneumonectomy in a patient upon whom an abscess had been previously drained externally. It was necessary in this case to remove a part of the chest wall. Total pneumonectomy and simultaneous resection of the chest wall will increase the mortality rate, but it seems worth the risk in that two such patients in this series are now living and well, one over 2 years and the other over 6 years.

The histological classification (Table 11) of primary cancer of the lung is worthy of note in considering the behavior of the cell types, operability, and prognosis. Careful study of biopsy specimens and resected pulmonary tissue, and necropsy examinations enabled us to classify the majority of the tumors. Frequently, the diagnostic specimens did not reveal the cell type and the tumor was classified from autopsy material. Squamous cell carcinoma constituted 44.3 per cent of the primary lung tumors. It was the only cell type which exhibited a tendency to invade the bony thorax (6 cases). Eight of the 17 cases submitted to pulmonary resection had this cell type. Four of the patients living and well had the squamous cell variety of tumors. Adenocarcinoma made up 22.7 per cent of the tumors classified. This cell type was more common in women. Four of the resected cases living and well belong to this group. The small cell type (33 per cent) includes the "oat cell" variety and the other highly undifferentiated tumors. The tendency to blood stream dissemination, rapid growth, and early metastasis to regional lymph nodes offers little hope in a patient with this cell type. One patient is living and well 8 months following resection.

TABLE 11—HISTOLOGICAL CLASSIFICATION 88 CASES

	CASES	PER CENT
Squamous	39	44.3
Adenocarcinoma	20	22.7
Small Cell	24	27.3
Unclassified	5	5.7

SURGICAL CONSIDERATION

Surgery of the thorax has made such rapid progress in the past decade that its possibilities in the management and application to various pathological lesions are not widely appreciated. Technical advances, adequate preparation of the patient, anes-

thesia, chemotherapy, antibiotics, and improved post-operative care have made operations in this field as safe as major operations in other specialties.

Preparation of a patient for pneumonectomy is not unlike the modern consideration of any patient about to undergo a major operation. Transfusions are given if the red blood count is under 3,500,000. Vitamins are administered parenterally. Low serum protein levels are corrected by amino-acids and blood plasma. Exercise is encouraged on the ward. Penicillin is given in a dose of 40,000 units every 3 hours for 48 hours prior to operation. Sulfadiazine has been abandoned during the pre-operative preparation of all the patients. It is used only in the cases with a purulent sputum which do not respond to penicillin. Artificial pneumothorax has been abandoned except in an occasional case.

The importance of a competent anesthetist cannot be over-emphasized. Intratracheal gas, oxygen and ether vapor anesthesia has been used in most of the cases. The addition of pentothal induction, curare during anesthesia, and of preliminary novocaine intercostal nerve block seem to complicate a simple and satisfactory anesthetic. Provisions are made for catheter aspiration of the tracheobronchial tree through the endotracheal tube. Preliminary bronchoscopy is not carried out unless indicated and only seldom is it necessary to do a post-operative bronchoscopy. The bronchoscope is always available and accomplishes little unless there is an indication for its use.

The anterior approach is generally employed unless invasion of the ribs posteriorly and dense pleural adhesions indicate a posterior approach. The bronchus can readily be ligated as the first step in the operation with greater ease through a posterior approach, and in patients with a large sputum volume this is to be considered seriously. The approach through the third intercostal space anteriorly results in less trauma and it is more rapid in its execution than the posterior approach through the fifth intercostal space. The head is lowered and an intravenous of physiological saline solution is started through a large canula placed in the saphenous vein. Three pints of citrated blood are prepared for use during the operation. The hilar structures, which include the pulmonary veins, pulmonary artery, and bronchus, are treated separately. Particular attention is directed to closure of the bronchus. Two layers of widely spaced silk sutures are placed in the long axis of the bronchus, the distal layer approximating the cut end of this structure. The bronchus is closed flush with the bifurcation of the trachea. The stump is permitted to retract into the mediastinum, and seldom has it been necessary to use a pleural graft. The mediastinal pleura is closed by interrupted silk sutures. All lymph nodes are removed in and about the hilus and beneath the carina. The pleural cavity is drained for 48 hours. The thoracic cage is closed by interrupted pericostal chromic catgut sutures.

Post-operatively, the primary object is to keep the airway clear to the remaining lung. The head down position for the first 8 hours after operation favors bronchial drainage. A wet tracheobronchial tree is not tolerated and catheter suction is immediately instituted unless supporting the chest during cough expels the secretions. Nurses are instructed in methods of supporting the chest in order to make an ineffective cough productive of the offending secretions. An oxygen concentration of 60 to 70 per cent is maintained in the oxygen tent for 24 to 48 hours. Water balance is maintained by parenteral fluids during the first 48 hours. The pre-operative dose of penicillin is continued for 8 to 10 days. The majority of these patients were out of bed on the fourth post-operative day and they were ready for discharge 2 to 3 weeks after the operation.

SUMMARY

Eighty-eight consecutive primary carcinomas of the lung which were histologically proved form the basis of this analysis of the symptoms, methods of diagnosis, and treatment of lung cancer. The material has accumulated during an 8 years period.

Seventeen patients (19.3 per cent) were submitted to a pulmonary resection. There were 3 hospital deaths (17.6 per cent) in the resected group. Four patients (23.5 per cent) died of recurrence of the carcinoma following their hospital discharge. One is living with a known recurrence. Nine patients (53 per cent) are living and well with a chance of surviving cancer of the lung. The longest survival to date is 7 years.

DISCUSSION

DR. ARTHUR B. GATHRIGHT, Richmond: Dr. Coleman's analysis of these 88 cases of primary carcinoma of the lung, both from the standpoint of diagnosis and management, is quite complete and leaves little room for elaboration except for the purpose of emphasis. For that purpose, then, I should like to mention several points.

The first is that of 88 cases suffering from one of the most difficult maladies with which we are familiar, there are nine patients who had a pneumonectomy living and well with a chance of surviving carcinoma of the lung, the longest survival in this group being seven years. This indicates that under certain circumstances, individuals with cancer of the lung can be helped and may be cured. I believe that we will have to await the passage of years to evaluate from a statistical standpoint the possibility of cures. At the present time, however, we know that these patients can be rehabilitated to a reasonably comfortable and useful life for a varying number of years.

The second important observation from this report is that of the 88 cases that came under observation, only 17 were found to be candidates for pulmonary resection, the reason being that in the others the condition was so far advanced that they were considered inoperable. In treating any type of cancer, there are only two weapons available, irradiation and surgery. X-ray as a curative measure in primary carcinoma of the lung has been practically abandoned, and its use as a palliative measure is quite limited. Surgery, then, until we are given new weapons, is our only approach, but if the surgeon does not get the case when it is in the early stage, even that is of little use.

That brings me to the third point on which I should like to comment, and that is the fact that the average duration of symptoms in this group of patients before a clinical diagnosis was made was six months. Some of this delay was no doubt the patient's fault, but a good percentage reported that they had consulted a physician promptly after the onset of symptoms, and others, within two or three months. I cannot help but wonder what happened to these patients during the interval between the time that they first sought medical help and the time that they were considered for surgery. I wonder how many gallons of cough syrup they consumed, how many quarts of "tonic" were given for weight loss or "run-down" condition. It is unfortunate that the symptomatology of so grave a disease is so similar to many less serious and rather common complaints. Cough is a familiar factor in the everyday lives of many, and it is so common in the physician's work that it is difficult to keep in mind the possibility that it may be of more serious significance than, perhaps, bronchitis or a cigarette cough, until the passage of time reveals other symptoms which put him on the alert. I am sure that in some of these cases, cancer may have been suspected months before it was an estahlished diagnosis, and Dr. Coleman has reviewed the diagnostic methods available, pointing out their inadequacy in many cases.

Progress in the treatment of cancer generally has not kept pace with the progress in other fields of medicine, and the progress that has been made has been due largely to improvement in the techniques and skill of the surgeon and roentgenologist, specifically in this instance in the improvement in technique of the surgery of the chest. It therefore behooves those of us who are apt to see cases of carcinoma of the lung first to keep the condition in mind, to give as complete an initial examination as possible where the symptoms could indicate carcinoma, with *diligent* follow up directed toward the earliest possible diagnosis. Only by getting these cases into the hands of a capable chest surgeon at the earliest possible stage of the disease is he given the opportunity to do the best that he can to bring about an increased number of cures of primary cancer of the lung.

DR. E. C. DRASH, Charlottesville: Dr. Coleman has presented a very clear picture of carcinoma of the lung and I think a very encouraging picture. A number of years ago the statement was made by a prominent physician that carcinoma of the lung was a condition that was diagnosed only at autopsy; later, by the greater use of bronchoscopy, plus X-ray, it had been moved to three months before autopsy. Nowadays the picture is very much brighter than that. It occurs as frequently as corresponding carcinoma of the large bowel, and I think the prospects are as good.

Dr. Coleman has mentioned pain as secondary only to cough. This pain is quite variable. It may be nothing more than a vague discomfort in the chest. Obviously, it is impossible to bronchoscope every man or woman of forty or over with chronic cough. With the widespread use of X-ray, in many of these cases the possibility of carcinoma can be eliminated and eliminated safely, but it is not safe to turn away these patients with cough syrup and encouragement when there is a possibility of carcinoma of the lung.

A number of years ago Dr. Cushing made an interesting observation on a patient who came to him with brain tumor. He removed the tumor, and the patient returned home in good condition. About seven years later he came back to Dr. Cushing with an identical tumor of the brain. The source of the tumor was still not found. It was removed, and he went home. Two years later the patient was in an accident, was brought to the hospital, and died. At autopsy there was found a small tumor of the lung. Because of that experience Dr. Cushing afterwards insisted that all patients with brain tumor have an X-ray of the lungs before operation.

The chief difficulty in these cases is that most of them are old, and many of them cannot stand the loss of one lung. It might seem almost axiomatic to say that the outlook for these patients with carcinoma of the lung under medical treatment is hopeless; that is, the mortality is one hundred per cent, so that any of them we can save is that much gain.

DR. I. A. BIGGER, Richmond: I enjoyed Dr. Coleman's very excellent paper, and there is really very little that one can add, but I think it is worth while emphasizing certain points which he has made. I should like particularly to stress the absolute necessity of earlier diagnosis of carcinoma of the lung and should like to stress the fact that diagnosis can he made earlier if proper attention is paid to the patient's history. That is, if one

takes a patient in the cancer age (and, as you know, that can be almost any age), a change in cough, as Dr. Coleman pointed out, or the development of cough where the patient had none before should not be disregarded. When patients in this age group develop a cough which cannot be accounted for on any other rational basis, complete studies should be made. Those studies should include careful physical examination and X-ray studies of the chest. If there is an abnormal pulmonary shadow, further examination should be made. In most cases I think that should include bronchoscopy.

I am in agreement with Dr. Coleman and Dr. Drash that many cancers of the lung can be cured, if diagnosed early and promptly referred for surgical consultation. This is particularly true in cancer of the lung, because you are dealing with a pedunculated structure which naturally improves the chances for complete extirpation of all tumor tissue. The most common ones tend to spread only through the lymphatics, rarely by the blood stream. This also gives a greater opportunity for complete extirpation.

DR. COLEMAN, closing the discussion: I want to thank Dr. Bigger, Dr. Drash and Dr. Gathright for the timely discussion; and I also want to thank the Program Committee for the opportunity extended to the veterans, of whom I am one, to appear on the program.

British Medical Officers Visit McGuire Hospital.

Representatives of the British Ministry of Pensions visited McGuire Veterans Administration Hospital at Richmond recently, showing particular interest in the spinal cord injury patients. McGuire is one of seven paraplegic centers operated by the VA.

The visiting doctors were: Dr. J. F. E. Prideaux, deputy director general of the medical services; Dr. L. Guttman, principal medical officer in charge of paraplegics; and Dr. J. Craft, principal medical officer for prosthetic services. Dr. Guttman spent five days at the Richmond institution observing the treatment and equipment for paraplegics, and was "very impressed" with what he saw.

He reported the same vast strides in England as here in the treatment of this disability since the First World War when the majority of such cases resulted in early death. He said there are about 600 paraplegics in England, around 270 of them at a spinal center at Stoke-Mandeville near Aylesbury, where he spends his time. A convalescent home is operated there in conjunction with the hospital, and after a time, he said, the patients are discharged either to their homes or to a permanent institution—"a kind of colony"—operated by the Red Cross. Some 60 paraplegics have been discharged to their homes and the majority of these are working, either in their homes or outside. "We consider no spinal case hopeless or useless", Dr. Guttman asserted. "The whole program is designed to restore the patient as a useful member of society."

The National Gastroenterological Association

Will hold its 12th annual convention and scientific sessions at the Hotel Chelsea in Atlantic City, N. J., on June 4, 5, 6, affording those interested in attending the centennial celebration of the American Medical Association and the meeting of the National Gastroenterological Association a chance to be present at both. The program will consist of eighteen separate papers on various phases of Gastroenterology and allied subjects, by well known authorities on the subject.

There will be one luncheon round-table conference on Thursday, the 5th, at which time Dr. Hyman I. Goldstein of Camden, N. J., will speak on "The History of Gastroenterology and the Development of this Specialty In America".

At the Annual Banquet on Thursday evening, the winner of the National Gastroenterological Association's 1947 Cash Prize Award Contest for the best unpublished contribution on Gastroenterological or an allied subject, will receive the prize of $100.00 and a Certificate of Merit. The guest speaker of the evening will be Dr. Homer T. Smith of the New York University College of Medicine whose subject will be "Plato and Clementine".

Program and further details may be obtained from the National Gastroenterological Association, 1819 Broadway, New York 23, N. Y.

OFFICE GYNECOLOGY*

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I have selected the subject of office gynecology because it is part of the line in which I am primarily interested. I have noted, during the ten years that I have been out of medical school, that there is a great tendency of the busy doctor to treat gynecological complaints by off-the-cuff prescriptions and never examine the patient. The procedure is simple and the equipment is little. All that is needed are several sized specula, a light, some finger cots, an examining table and ten minutes of time.

If we are to cut down deaths from malignancies, we must do more complete examinations and eradicate all abnormal conditions as we find them.

I have not tried to cover all of the field of office treatment, but have selected some of the commonest complaints as follows: leucorrhea, low back-ache, menorrhagia and metrorrhagia, menopausal syndrome and dysmenorrhea.

By far the most common complaint is a leucorrhea or a discharge with itching. I would like to say at this point that when a discharge is noticed by a patient, or found rather profusely in the vagina, it is abnormal and cause must be found. The commonest site is the cervix and, in order, the causes are damaged cervix from parturition followed by secondary infection in the cervical glands, specific infection of the cervix, damaged or otherwise, such as gonorrhea, Trichomonas and Monilia infection of the vagina. It is especially important in all cases, especially those who have had the menopause, that all early malignancy be ruled out. Do not hesitate to take biopsies, which can be done in the office without discomfort to the patient.

For treatment, first give a thorough visual examination. Do not overtreat. Most cervicitis will respond to Negatan (Lilly). The best time is immediately after the menstrual period. The solution will coagulate the infected tissue, which will slough off as healing takes place. Follow the application with plain water irrigations daily to clean out the increased leucorrhea, inspect the cervix after the next menses. Usually, by this time, the treated area will be healed and you can see what is left to be treated. Applications may be made high in the cervical canal with this solution, if done gradually, without fear of a stricture. These treatments, if done more frequently than monthly, only irritate. If there are cysts present, the use of a light cautery to puncture them will hasten healing. In patients with a history of salpingitis or pelvic peritonitis, use very little cautery because of the danger of stirring a latent infection. Five per cent gentian violet is specific for Monilia. Flip a coin and take your choice on treatment of Trichomonas.

Closely allied to the above is the frequent complaint of lower abdominal discomfort and low backache. The patients are examined digitally and frequently found to have a retroversion or tender broad ligaments, and all the blame is placed on the retroversion or tubes. In my experience, a uterus that is retroverted, but can be moved, does not cause much trouble. Here again the offender is usually the cervix because, again, a chronic endocervicitis with inflammatory extension by lymphatics through the broad ligaments to the presacral chains will cause discomfort.

Clean up the cervix and generally most of the back-ache or pelvic discomfort will disappear. If not, be sure that your trouble is not skeletal or postural. These symptoms are frequently seen in the obese or very thin grand multipara with sloping shoulders, sagging abdomen with flaccid muscles and a forward tilt of the pelvis. Try to correct these before advising an operation because, if you don't, in four or five months the patient will be back with the same complaints, wanting to know what you are going to do next.

Menorrhagia and metrorrhagia are cardinal symptoms of trouble, especially around the menopause and afterwards. When a woman changes her menstrual schedule she should be thoroughly studied. A malignancy does not look at the birth certificate. A D and C is indicated with a complete pelvic examination while under the anesthesia. You know the many causes. The above procedure is relatively safe and it pretty well eliminates guess-work.

Menopausal symptoms, if you can believe the

*Read at the meeting of the Medical Society of Northern Virginia in Luray, April 9, 1946.

drug salesman, have more ideal treatments than the average dog has fleas. It is probably as poorly and *more* expensively handled than any other complaint. The first thing a doctor should do is become familiar with one product, or combination of products, and stick to them. In the physiological menopause the patient should be carefully evaluated as to her discomfort and frequently can be carried along on moderate sedation. If this does not seem satisfactory and supplemental therapy is found to be necessary, give a large amount initially until stabilized and then work out a tapering off schedule. The usage of small, occasional shots only tends to discourage the patient.

In the surgical menopause you have a somewhat different problem because all endocrine secretion has been cut off suddenly. It is important to replace this quickly before a general glandular disarrangement takes place. Here very large dosages should be used immediately and cut down slowly.

Dysmenorrhea is a very discouraging problem. Pregnancy at the best is only a very temporary answer. Here it is important to eliminate all physical defects, especially infected cervices or otherwise. Frequently outside factors, such as emotional, must be eliminated. If this has been done most patients will get relief with atropine combined with codeine and one of the coal tar derivatives. If this does not give fair relief, you will have to look for other causes such as endometriosis, etc.

New Books.

Among recent additions to the Library of the Medical College of Virginia are the following, which are available to our readers under usual library rules:

Allen—Peripheral vascular diseases.
Andrews—Diseases of the skin.
Becker & Obermayer—Modern dermatology and syphilology.
Block—Amino acid composition of proteins and foods.
Braun-Menendez—Renal hypertension.
Brill—Lectures on psychoanalytic psychiatry.
Brown—Ulcer of the stomach, duodenum and jejunum.
Cameron—The nervous child.
Cooke—Allergy in theory and practice.
Denny-Brown—Diseases of the basal ganglia and subthalamic nuclei.
Dobson—Anatomical eponyms.
Dameshek—Leukopenia and agranulocytosis.
Darlington & Janaki—Chromosome atlas of cultivated plants.
Davidoff & Dyke—The normal encephalogram.
English & Pearson—Common neuroses of children and adults.
Engle—The problem of fertility.
Fedder—A girl grows up.
Fischer—Biology of tissue cells.
Friedgood—Endocrine functions of the hypophysis.
Greenblatt—Office endocrinology.
Gates—Human genetics.
Gardner—Industry, tuberculosis and compensation.
Greenstein—Biochemistry of cancer.
Harris—Banting's miracle: the story of the discoverer of insulin.
Harrow—A textbook of biochemistry.
Hawk, Oser & Summerson—Practical physiological chemistry.
Hill—Silent enemies. The stories of the diseases of war and their control.
Landis, Carney & Bolles—Textbook of abnormal psychology.
Lea—Actions of radiations on living cells.
Lorand—Technique of psychoanalytic therapy.
Luck—The war on malnutrition and poverty.
Luckiesh—Applications of germicidal, erythemal and infra-red energy.
Lysenko—Heredity and its variability.
Marshall—The venereal diseases—a manual for practitioners.
Mees—The path of science.
Merrit, Adams & Solomon—Neurosyphilis.
Neuberger—British medicine and the Vienna school.
Newburgh—The significance of the extra-cellular fluid in clinical medicine.
Pearl—Man the animal.
Polyak—The human ear in anatomical transparencies.
Ruesh—Chronic and psychological invalidism.
Sinai, Anderson & Dollar—Health insurance in the United States.
Snyder—The principles of heredity.
Stewart—Man. An autobiography.
White—Mucous colitis.

MORTALITY FROM CORONARY DISEASE BY AGE, SEX, AND RACE

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It is the purpose of this compilation to present the statistics and rates of deaths from coronary disease (including angina pectoris) in the United States during the year 1940, by age, sex, and race.

The figures given in the tables are derived from the United States Census report on *"Vital Statistics of the United States"* for 1940. The figures for deaths reported as due to "diseases of coronary arteries" and "angina pectoris," separately given therein, are here combined as coronary deaths. Only in a census year, such as 1940, can reliable figures as to the population or number of individuals living in the various age and other groups be obtained to serve as a basis for the calculation of mortality rates. Shifts of population in other years are too indeterminate and unpredictable to yield sufficiently accurate results.

Table I exhibits the numbers and rates of coronary deaths according to age in the United States during the census year 1940. Column 2 shows the population or number of living inhabitants in each 5-year period of the life span. After the years of childhood the numbers, of course, continuously diminish with advancing age. Column 3 presents the total number of coronary deaths reported in each age group: almost zero below the age of 20 years, then increasing to a maximum of over 15,000 deaths in the age group of 65-69 years, and then diminishing. This late diminution, of course, follows and is caused by the decline of population in the latter periods of life. Further analysis is required to determine the actual mortality rates of coronary disease according to the population at the different ages. These are shown in column 4, which gives the

TABLE I.

NUMBER AND RATES OF DEATHS FROM CORONARY DISEASE (INCLUDING ANGINA PECTORIS), BY AGE GROUPS, IN THE UNITED STATES DURING 1940.

Age group, years.	Population in each age group.	Deaths from coronary disease and angina pectoris.		Total deaths from all causes.	
		Total number.	Rate (number) per 100,000 of population in each age group.	Number.	Ratio of coronary deaths to total deaths, per cent.
1	2	3	4	5	6
All ages	131,669,275	101,463	77.1	1,417,289	7.2
Under 5	10,541,524	29	0.3	135,662	0.02
5-9	10,684,622	12	0.1	11,570	0.1
10-14	11,745,935	16	0.1	11,683	0.1
15-19	12,333,523	65	0.5	21,168	0.3
20-24	11,587,835	141	1.2	27,831	0.5
25-29	11,096,638	324	2.9	30,695	1.1
30-34	10,242,388	752	7.5	34,579	2.2
35-39	9,545,377	1,779	18.5	41,670	4.3
40-44	8,787,843	3,691	42.0	53,689	6.9
45-49	8,255,225	6,477	78.5	71,596	9.0
50-54	7,256,846	9,375	129.2	92,817	10.1
55-59	5,843,865	11,941	204.3	108,476	11.0
60-64	4,728,340	14,198	300.3	126,885	11.2
65-69	3,806,657	15,658	411.3	149,039	10.5
70-74	2,569,532	14,769	574.8	156,986	9.4
75-79	1,503,982	11,212	745.5	142,554	7.9
80-84	774,391	7,062	913.2	112,713	6.3
85-89	277,012	2,879	1,039.3	59,112	4.9
90-94	69,598	178	255.8	20,722	0.9
95-99	14,463	26	179.1	4,861	0.5
100 and over	3,679	103	2,799.9	1,259	0.8

TABLE II.

NUMBER AND RATES OF DEATHS FROM CORONARY DISEASE (INCLUDING ANGINA PECTORIS), BY SEX AND RACE, IN THE UNITED STATES DURING 1940.

Sex and race	Population 1940	Deaths from coronary disease and angina pectoris	
		Number	Rate (number) per 100,000 of population in each class
1	2	3	4
Total	131,669,275	101,463	77.1
Male, total	66,061,592	70,669	107.0
Female, total	65,607,683	30,794	46.9
White	118,214,870	96,847	83.3
Male	59,448,548	67,931	114.3
Female	58,766,322	28,916	49.2
Negro	12,865,518	4,468	34.7
Male	6,269,038	2,615	41.7
Female	6,596,480	1,853	28.1
Other races	588,887	148	25.2
Male	344,006	123	35.8
Female	244,881	25	10.2

rate (or number) of coronary deaths for each 100,000 of living population at the different ages. The coronary deaths for 100,000 of population continuously increase from practically zero at the beginning to over 1,000 at age 85-89, and then sharply decrease, except for an abrupt and strange jump at 100 years and over.

In column 6 of Table I is given a compilation of the ratio per centum of deaths due to coronary disease to the total numbers of deaths from all causes, at the different ages. This shows a specific curve differing somewhat from the rate per population appearing in column 4. The ratio percentage of coronary deaths to total deaths at the various ages increases to a maximum of 11.2 per cent at age 60-64 years, and then consistently diminishes. At the higher ages death results in increasing numbers and proportions from non-coronary causes.

Table II presents the 1940 death rates from coronary disease by sex and race, per 100,000 of the population in each class. The female rate is consistently much less than that of males in all the race classes; in the aggregate less than one-half. The rates are also much lower in the negro and other races than in the whites.

Sudden and unexpected deaths are a matter of concern in life insurance, and to the general public as well. Statistics of the incidence of sudden deaths in themselves are not available, but they will in general parallel the deaths from coronary disease as here shown.

New Device to Inject Penicillin Formula.

A new device that aids physicians to inject penicillin in the beeswax and oil suspension which is considered a great advance in syphilis therapy, has been announced by the president of Winthrop Chemical Company, Inc. It is now available to doctors and hospitals after exhaustive clinical tests.

Called a Punctule, it was developed by Martin Lasersohn, M.D., a Winthrop vice-president. It is made of glass and neoprene, and the unit includes a double-end 21-gauge needle. To administer the injectible medicament, the Punctule is placed into the barrel of an ordinary hypodermic syringe, and injection is accomplished by pushing the thumb-rest of the Punctule. As now being offered by Winthrop, the Punctule will contain a dosage of 300,000 units of penicillin in beeswax and oil called the Romansky formula. In addition to its use in the treatment of venereal disease, the Romansky formula penicillin is indicated for blood poisoning, pneumonia, scarlet fever, tonsillitis, and other types of infections. The dosage selected is good for from 18 to 24 hours as compared to other penicillin solutions that require injections every two or three hours.

When the physician is dealing with the Romansky penicillin or with other opaque parenteral solutions, reliable aspiration is assured by the Punctule despite the opacity of the fluid. The solution-containing Punctule is not placed into the syringe until after the hypodermic needle is inserted and aspiration is made to be absolutely certain that the needle has not penetrated a blood vessel.

Dr. Lasersohn went to Winthrop in 1930 from the Medical College of Virginia, Richmond, on whose faculty he served for six years. He still keeps membership in the Medical Society of Virginia.

REPAIR OF POSTERIOR VAGINAL HERNIA FROM BELOW, WITHOUT OPENING THE SAC: REPORT OF CASE*

C. I. SEASE, M.D.,
Richmond, Virginia.

Mrs. L. M. B., W. F. M., age 51.—On April 6, 1936, this patient had a Kocher type suspension, anterior colporrhaphy, and perineorrhaphy for prolapse of the uterus.

Four years later she returned on account of a bulging in the vagina, which she thought was a return of her previous trouble. Careful examination, however, showed that her repair work was in good condition, but she had a hernia through the cul de sac and it contained intestine. Accordingly she was sent to the hospital for operation.

The following procedure was then undertaken with complete success.

April 1, 1940. Ether Anesthesia: Lithotomy position.

Incision made as in repair of rectocele. Flap dissected upwards until a thin walled sac exposed. Sac contained what appeared to be intestine. The head of the table was lowered, and contents of sac reduced easily. With sponge forceps on the sac for traction, the dissection was carried upwards behind the cervix, as far as possible, and at this point the neck of the sac was only about an inch in diameter. Making traction with the sponge forceps, and pressing the tip of the index finger beneath the neck of the sac and using it as a guide, a purse string suture of No. 1 chromic catgut was placed around the sac. Making still more traction, another purse string of the same material was placed a little higher above the first one. The sac was then pushed through the purse string sutures with a homostat and the first purse string suture pulled tight as the homostat was removed. The second purse string suture was then tied. A high repair was then done as in rectocele.

Examination in June, 1946, six years later, shows that the repair was entirely satisfactory.

It is not known whether all cases of enterocele can be so repaired. Where the neck of the sac is large, it may not be satisfactory. But, with a narrow neck, this procedure of inverting the sack without opening it and thus entering the peritoneal cavity, should appeal to most surgeons as a simplified and safer method of dealing with the sac, than the usual procedure of incision followed by amputation and closure.

505 Professional Building.

*Read at Retreat for the Sick Staff Meeting.

McGuire Veterans Hospital as a Paraplegic Center.

Special facilities for the hospitalization and medical rehabilitation of spinal cord injury patients—something new in the hospital field—became a reality at McGuire Veterans Administration Hospital recently when special wards for the 165 such patients there were completed.

Designed to house these patients and the equipment for their special treatment in a compact unit —six parallel one-story buildings with a connecting corridor in the center—the new quarters also provide a more home-like atmosphere for the paraplegics, who, of necessity, are long-time patients.

McGuire is one of seven paraplegic centers operated by the Veterans Administration. Treatment of paraplegics on so large a scale is a new thing. Following World War I, before such strides had been made in combating infection and other phases of medicine, few spinal-cord injury cases survived.

The new quarters offer more space, more accessibility, and brighter, airier surroundings. Inclined ramps have replaced steps at all entrances so that both wheel chairs and litters can be accommodated. Suspended over each bed from the ceiling is an adjustable trapeze to assist the patient in lifting himself out of bed.

At the ends of the buildings are gayly decorated solariums, where patients may enjoy the sunshine. Showers, basins, toilets and other facilities for everyday living are specially constructed or adapted to accommodate wheel chairs. The paraplegics' own gymnasium, their physical and occupational therapy rooms and mess hall are all within the new unit.

PUBLIC HEALTH

L. J. ROPER, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for March, 1947, as compared with the same month in 1946, and for the period of January through March, 1947, compared with the same period in 1946, follows:

	Mar. 1947	Mar. 1946	Jan.-Mar. 1947	Jan.-Mar. 1946
Typhoid and Paratyphoid	7	7	17	18
Diarrhea and Dysentery	712	187	1,013	408
Measles	1,982	2,898	3,371	4,391
Scarlet Fever	232	579	538	1,107
Diphtheria	25	38	89	141
Poliomyelitis	3	5	12	6
Meningitis	11	31	33	91
Undulant Fever	7	3	9	10
Rocky Mountain Spotted Fever	0	0	1	0
Tularemia	2	2	26	23

ANIMAL BITES AND RABIES

Animal rabies has been endemic in Virginia for some years and so far in 1947 shows a tendency of increase. During 1946 the State Health Department laboratories reported 108 animal heads positive for rabies. These rabid animals were found in 35 of the 100 Virginia counties, with main concentration in the northeastern, south central and southwestern sections. In the first three months of 1947 there have been recorded 30 rabid animals with distribution essentially the same, involving 14 counties. Each animal bite reported presents the attending physician and the health officer with a major problem. Although the danger of human rabies is not great individually, a potential risk must be recognized and possibilities of other serious infections must be weighed. During the past six years there have been five human deaths from rabies in Virginia. The problem is of sufficient importance to necessitate the following recommendations in control and in treatment:

I. Recommendations in the Control of Rabies
   1. Report all animal bites to the local health department. Those areas without public health facilities should report directly to the State Health Department.
   2. The biting animal should be promptly quarantined and regularly observed over a minimal period of ten days. If possible all other animals exposed or bitten should be isolated for at least 45 days. If the biting animal is shown rabid those animals bitten should be killed.
   3. Avoid killing the suspect animal if possible. If, for reasons of public safety such action must be taken do not injure the brain.
   4. When the animal dies or is killed remove the head carefully, pack in dry ice in watertight sealed container and box. Ship promptly to the nearest State Health Department laboratory.
   5. When rabies occurs in any area, restriction of dogs is recommended for 45-90 days or longer. Some measure of control may also be expected in recommending the anti-rabic vaccination of dogs.
   6. Special effort on a sustained basis should be directed against stray dogs in areas of rabies prevalence.

II. Recommendations in the Preventive Treatment of rabies
   1. A careful history of the circumstances surrounding each animal bite is always necessary as a guide to treatment and control. Every physician well knows that many animal injuries are provoked and the lesions resulting are frequently superficial, requiring only local antiseptic care.
   2. It is well to remember that all animal bites present potential dangers of tetanus, gas gangrene and other infections, as well as rabies.
   3. The danger of rabies and other infection is lessened if the wound is cauterized with fuming nitric acid.
   4. Deep penetrating and lacerated wound should be cleared of devitalized tissue.
   5. Animal bites of the arm, shoulder, neck and head are more dangerous than those elsewhere on the body. If indicated, anti-rabic treatment should be started promptly.
   6. When specific treatment is delayed in the case of proven rabid animal bite, it is recommended that dosage be doubled initially and possibly total vaccine increased.
   7. Anti-rabic treatment is indicated when the biting animal may not be found or be identified.

MEDICAL SOCIETY OF VIRGINIA

PUBLIC RELATIONS

The Medical Society of Virginia Goes on the Air!

Beginning April 28 and extending through July 25, a state-wide network of twelve radio stations covering the 100 counties of Virginia is broadcasting 60 programs a week for the Medical Society of Virginia as a public service. Theoretically, 81 per cent of the families of Virginia are able to hear "Tell Me Doctor" five days a week. This program probably reaches more people daily than the combined medical personnel in the state are able to contact.

The radio stations cooperating in presenting "Tell Me Doctor", with the scheduled times are listed:

WPIK, Alexandria 10:05 A.M.
WOPI-FM (96.9 Meg.), Bristol 10:00 A.M.
WCHV, Charlottesville 12:35 P.M.
WBTM-FM (92.1 Meg.), Danville (consult newspaper)
WFVA, Fredericksburg 8:55 A.M.
WSVA, Harrisonburg 4:55 P.M.
WLVA, Lynchburg 1:15 P.M.
WMVA, Martinsville (Consult newspaper)
WTAR, Norfolk 10:45 P.M.
WRNL, Richmond 1:30 P.M.
WDBJ, Roanoke, 4:40 P.M.
WINC, Winchester 4:12 P.M.

At the conclusion of the thirteen-week series, these twelve stations will have broadcast 780 programs for the Medical Society of Virginia. Each day the same program is scheduled on all twelve stations, though individual stations may schedule and rearrange them as they see fit.

Topics covered in these daily three-minute transcriptions include diseases, scientific developments, economics of medicine, the medical profession, health and medical facts, etc. A random sampling would touch on practically every phase of medicine and health.

Not all radio programs are acceptable to radio stations, even if they were paid for. Even though the radio stations want to work with the Medical Society of Virginia, the fact that they will take the program as a public service feature (gratis) is indicative of their regard for this "Tell Me Doctor" radio program.

We are authorized to state that if the time being donated to this program by the radio stations were purchased, it would cost us well over $7,000.

The radio stations of Virginia have rallied wonderfully to the call of the Medical Profession, cooperating in presenting "Tell Me Doctor" as a public service feature. And now comes the obligation of the Medical Profession to cooperate with the radio stations in publicizing this program. Displaying the announcement cards in reception rooms in a prominent place is of paramount importance in informing patients about the program. Each doctor in the State can mean a great deal to the success of the program by availing himself of every opportunity to publicize it. Perhaps one of the most valuable contributions each doctor could make would be a personal expression of appreciation to the radio station serving his community by a personal letter, and encouraging laymen to do the same.

This is the initial radio program of the Medical Society of Virginia, and for that reason it is especially important that no effort be spared which could contribute to its success. Our relationship with radio stations in the future will be very largely affected by the success of this first program.

While the Public Relations Department is by no means convinced that "Tell Me Doctor" is the best radio program the Medical Society could broadcast, there were several factors governing its selection. First of all, the time element is vital. We were able to purchase these records from the Michigan State Medical Society already transcribed, whereas it would take months to build our own program. Secondly is the matter of cost. Our budget does not allow for the tremendous expense of building a series of radio programs at this time, and we were able to purchase "Tell Me Doctor" from Michigan at cost.

With the experience gained from this first thirteen-week series, and with the suggestions from individual doctors and radio friends, the Public Relations Department should be able to improve future radio activities.

"Test Your Medical IQ" Appears Weekly.

We are preparing for some newspapers a quiz type column, "Test Your Medical IQ". The first is expected to be carried the first week in May.

In our attempt to build a column for weekly and afternoon newspapers, we considered the various types of columns which are being used in other states. Some use the essay type discussing one subject each week. Others present a list of health facts. We believe the quiz type would catch and hold more reader interest than any of the others. It seems that the popularity enjoyed by quiz sections in such magazines as *Coronet, Reader's Digest, Hygeia,* etc., is indicative of this. These "Test Your Medical IQ" quizes are developed from health and medical information listed generally under ten headings: (1) The Patient; (2) Diseases and Ailments; (3) Scientific Developments; (4) Public Health Service; (5) The Medical Profession and Medical Economics; (6) Prosthetic Devices and Hospitals; (7) Medical History; (8) General Medical Information; (9) General Health Information; and (10) First Aid. Each quiz is expected to carry ten questions, one being taken from each of the above ten headings.

Caution and care are being exercised by the Public Relations Department in the development of this material, and it is passed upon by our Medical Censor Board before it is submitted to the newspapers. We believe that this information will be welcomed by the public. Many newspaper people who have seen the quiz have expressed a similar opinion.

As our office learns more from our experience with this column, and as more doctors send us their suggestions, we hope to improve this one means of reaching the public through the newspaper.

Virginia Doctor Honored Nationally.

"Doctors Then and Now"—the nation-wide N.B.C. radio broadcast 3:00-3:30 P.M., Saturday, May 10, will be centered around a Virginia doctor—Dr. John Peter Mettauer (1787-1875).

The material was assembled by Mrs. Martha A. Turnage of the Public Relations Department of the Medical Society of Virginia.

Among others, Dr. Wyndham B. Blanton, Dr. M. Pierce Rucker, and Dr. J. D. Eggleston, President Emeritus of Hampden-Sydney College, rendered valuable assistance both in providing material and in the way of suggestions.

This is to be a live broadcast, at least the last three minutes of which will be given to Dr. Wingate M. Johnson, Editor of the *North Carolina Medical Journal,* Winston-Salem, North Carolina.

It is urged that members of the medical profession and their friends will try to hear this program.

This office is planning to contact all NBC stations in Virginia prior to this broadcast expressing our appreciation for this program and suggesting such publicity as they may be in a position to provide gratis.

We are also planning to contact the press. Great assistance can be rendered in this regard by doctors who remind their newspapers of this and its importance.

This may provide some useful suggestions if we decide, to honor in a similar way, local members, present and past, of the medical profession in Virginia.

BOOK ANNOUNCEMENTS

Books received for review are promptly acknowledged in this column. In most cases reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Practical Physiological Chemistry. By PHILIP B. HAWK, Ph.D., President, Food Research Laboratories, Inc., Long Island City, New York; BERNARD L. OSER, Ph.D., Director, Food Research Laboratories, Inc.; and WILLIAM H. SUMMERSON, Ph.D., Associate Professor of Biochemistry, Cornell University Medical College, New York City. 12th Edition. Philadelphia, The Blakiston Company, 1947. xiv-1323 pages. Illustrated. Cloth. Price $10.00.

Fundamentals of Clinical Neurology. By H. HOUSTON MERRITT, M.D., Professor of Clinical Neurology, College of Physicians and Surgeons, Columbia University; Chief of Division of Neuropsychiatry, The Montefiore Hospital. FRED A. METTLER, M.D., Ph.D., Associate Professor of Anatomy, College of Physicians and Surgeons Columbia University. And TRACY JACKSON PUTNAM, M.D., Professor of Neurology and Neurological Surgery, College of Physicians and Surgeons, Columbia University. Philadelphia, The Blakiston Company, 1947. x-289 pages. Illustrated. Cloth. Price $6.00.

Medicine in the Changing Order. Report of the New York Academy of Medicine Committee on Medicine and the Changing Order. New York, The Commonwealth Fund, 1947. xviii-240 pages. Cloth. Price $2.00.

The Pharmacopoeia of the United States of America. (The United States Pharmacopoeia.) Thirteenth Edition. By Authority of the United States Pharmacopoeial Convention, meeting at Washington, D. C., May 14 and 15, 1940. Prepared by the Committee of Revisions and Published by the Board of Trustees. Official from April 1, 1947. Mack Publishing Company, Easton, Pennsylvania. 1947. cvii-957 pages. Cloth.

Office Endocrinology. By ROBERT B. GREENBLATT, B.A., M.D., C.M., Professor of Endocrinology, University of Georgia, School of Medicine; Director, Sex Endocrine Clinic, University Hospital, Augusta, Georgia. With a Foreword by G. Lombard Kelly, M.D., Dean, University of Georgia, School of Medicine. Third Edition. Charles C. Thomas, Springfield, Illinois. xiv-303 pages. Illustrated. Cloth. Price $4.75.

In no other field is there so wide a variation between results obtained in human beings and those obtained in experimental animals as in endocrinology. This is particularly true in female endocrinology. For that reason the enthusiasm of the laboratory investigator must be tempered by clinical experience, instead of the other way round as is usually the case. The author represents a nice balance between clinical judgment and investigative enthusiasm. He has six chapters on male endocrinology but has rightly given most of the space to the consideration of female endocrinology. His discussion of functional uterine bleeding and menometrorrhagia is particularly good and a wider acceptance of his ideas should prevent the removal of many normal uteri.

M. P. R.

America's Williamsburg. By GERALD HORTON BATH. Photographs by Wendell MacRae. Printed by Photogravure and Color Company. Published by Colonial Williamsburg, Incorporated, Williamsburg, Virginia. 48 pages. Price 65 cents.

America's Williamsburg is the title of Colonial Williamsburg's latest publication. It is, of course, not a medical publication, but it is such a beautifully illustrated story of the restoration of the place where much medical history was made that many doctors will want to see it. The photographs were made by Wendell MacRae and the pamphlet was written and designed by Gerald Horton Bath.

M. P. R.

The Chest. A Handbook of Roentgen Diagnosis. By LEO G. RIGLER, M. D., Professor and Chief, Department of Radiology, University of Minnesota. Chicago, The Year Book Publishers. 1946. 352 pages. Illustrated. Cloth. Price $6.50.

Dr. Rigler has written a remarkably concise yet thorough work on the lungs, mediastinum and pleura, fulfilling the desire he expressed in his preface "to make available a sufficient body of material to provide a foundation of knowledge and a guide for the analysis of any roentgenogram of the chest".

The general introductory discussions concern methods of examination, normal variations and artefacts, physiology, pathologic conditions, and procedure in roentgen interpretation, with the important factors clearly described and correlated with the roentgen appearance. A brief discussion of each pathologic condition precedes the illustrations relative to that disease process, with the salient features clearly illustrated on the films and interpreted in the explanatory notes. Points of differential diagnosis are considered.

The roentgenograms have been carefully chosen and thoroughly labeled, and are clearly reproduced. It would have made for easier reading if the labels had been printed directly on the illustrations, instead of the letter reference system used, but there is partial compensation in the fact that the explanation of each figure is in the page directly opposite that illustration.

A valuable addition might have been some discussion of the limitations of fluoroscopy, which is hardly mentioned, although its advantages are pointed out.

"The Chest" is highly recommended as a most useful guide and reference for the radiologist-in-training, as well as for the diagnostician, thoracic surgeon, and others whose practice and interest necessitate familiarity with the appearance of the normal and abnormal lungs, mediastinum and pleura.

STUART J. EISENBERG.

Dentistry. An Agency of Health Service. By MALCOLM WALLACE CARR, D. D. S., Director of Oral Surgery and Visiting Oral Surgeon, Metropolitan Hospital; Attending Oral Surgeon, St. Luke's Hospital, Knickerbocker Hospital, Polyclinic Hospital, Flower-Fifth Avenue Hospital; Consultant Oral Surgeon, Roosevelt Hospital, New York; etc. New York. The Commonwealth Fund. 1946. 219 pages. Cloth. Price $1.50.

This survey of dentistry in the United States is one of a series of monographs issued under the auspices of the Committee on Medicine and the Changing Order of the New York Academy of Medicine, as a contribution to contemporary thought on questions in the general medical and health field.

The progress of dentistry from a biomechanical craft to an autonomous profession is shown through the history of dentistry and the development of dental education. Dental practice is discussed from the standpoint of private practice, hospital service, industrial practice, public health dentistry, and preventive dentistry. A promising result of research in dental caries is the current experiment to limit dental caries through presence of very small quantities of fluorides in the communal water supply.

It is stated that there is an insufficient number of dentists in the United States to perform adequate services for the entire population, and that the time required for dental care per patient is greater than for medical care of the average patient. The nearly universal need for dental service militates against the application of the insurance principle in giving dental health service. As a step in providing more adequate dental health care, the suggestion is made that a complete dental health plan be initiated experimentally in a limited area, concentrating on children between the ages of three and eighteen years. Such a plan would favor the arrival in early adult life at a condition of sustained dental health, and furnish an actuarial basis for a general insurance plan for dental care in subsequent years and for future generations.

This book is worthy of review by all who are interested in a dental health program.

C. W. MORHART.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President ..... MRS. J. E. HAMNER, Petersburg
President-Elect ..... MRS. J. L. DECORMIS, Accomac
Recording Secretary ..... MRS. M. H. HARRIS, West Point
Corresponding Secretary, MRS. MEADE EDMUNDS, Petersburg
Treasurer ..... MRS. REUBEN SIMMS, Richmond
Editorial Chairman ..... MRS. E. HOLLAND TROWER, Eastville

A. M. A. Meeting.

Last call for reservations for the Twenty-fourth Annual Convention of the Woman's Auxiliary to the American Medical Association, which will be held at Haddon Hall Hotel, Atlantic City, New Jersey, June 9-13.

ATLANTIC CITY EXTENDS A HEARTY WELCOME TO YOU

The Arlington Auxiliary

Held a mixed bridge party on the night of February 26th at the Washington Golf and Country Club, from which was raised $96.00.

The regular monthly meeting was held on the night of March 6th at the Washington Golf and Country Club. There was no special program, but it was decided to have a luncheon-bridge on April 8th, each member to bring a doctor's wife in order to stimulate interest and membership in the auxiliary.

The Auxiliary has undertaken some of the volunteer work of the Arlington Hospital. Starting in February, the Auxiliary divided up into three groups to assist the Hospital Women's Auxiliary at the Reception Desk, Library Cart and Flower arrangement programs.

ELEANOR C. DETWILER,
Chairman, Press and Publicity.

Northampton-Accomack Auxiliary.

This Auxiliary held its regular quarterly meeting on April 8th at the home of Mrs. G. L. Fosque at Onancock, the president, Mrs. B. N. Mears, presiding. There were twelve members and one guest present. It was regretted that Mrs. J. E. Hamner, State President, was unable to attend as the guest speaker as had been planned, but Mrs. Rooker J. White gave a talk on "New Legislation and What It Leads To."

It was voted to place "Hygeia" in all the high schools of the two counties, both white and colored, as a gift from the Auxiliary. A report from the Chicago convention was given by Mrs. J. L. Decormis. The guest, Mrs. William J. Sturgis, Jr., was welcomed. The meeting then adjourned for a social hour and delicious refreshments.

The next meeting will be the annual picnic and a social meeting at the cottage of Mrs. B. N. Mears at Silver Beach on July 8th.

CATHERINE R. TROWER (MRS. HOLLAND),
Editorial Chairman.

The Auxiliary to the Richmond Academy of Medicine

Met Friday, March 21st, in the Academy Building.

Mrs. T. Stacy Lloyd, city commander of the Richmond Chapter of the Virginia Cancer Foundation, spoke on "The Cancer Control Program". She was introduced by the Program Chairman, Mrs. Andrew G. Shetter.

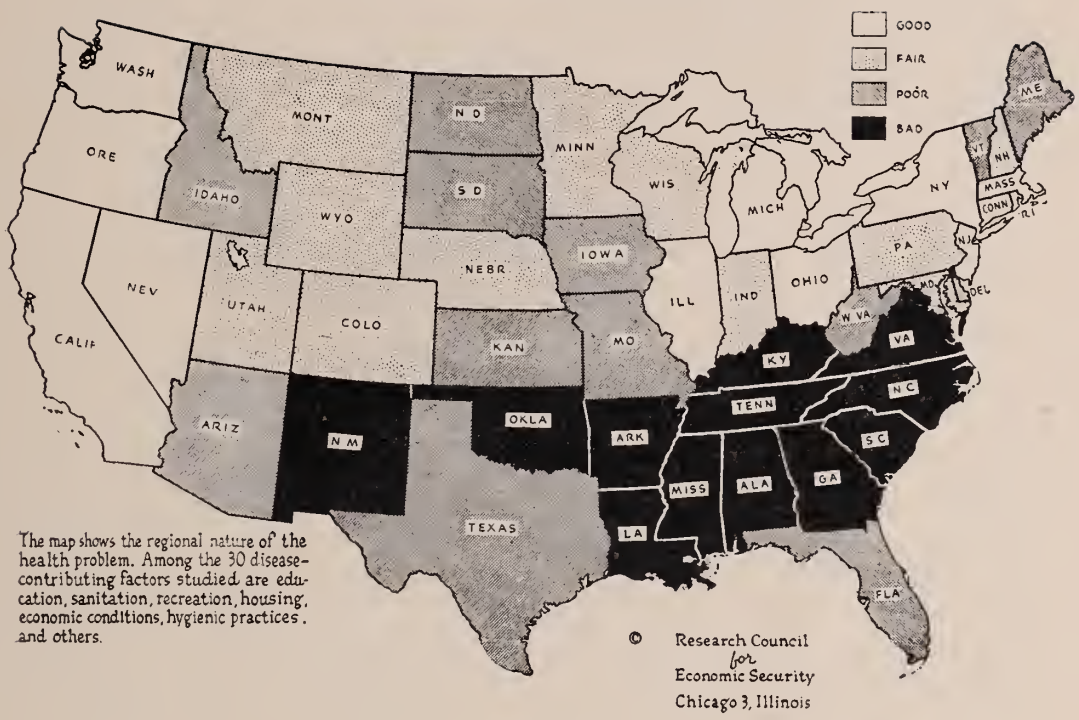
The luncheon chairman, Mrs. Peter Pastore, was assisted by Mrs. H. Stuart MacLean and Mrs. Arthur Klein.

Dr. Matilda Chalkley, President, announced the annual benefit bridge party to be given April 11th, at Miller and Rhoads tearoom, all proceeds to be for Sheltering Arms Hospital, and other philanthropic work of the Auxiliary.

MYRTLE G. MORTON, (MRS. W. R.)
Editorial Chairman.

EDITORIALS

Our National Health Program



The map shows the regional nature of the health problem. Among the 30 disease-contributing factors studied are education, sanitation, recreation, housing, economic conditions, hygienic practices, and others.

Hospital Beds

NO ONE in Virginia will deny that there is an alarming shortage of hospital beds. Many patients in all sections of the Commonwealth fail to get necessary medical attention because there is not a hospital bed available. In 1940, when the data upon which the above map was based were compiled, Virginia had one hospital bed for every 324 inhabitants. In the United States as a whole there was one hospital bed per 283 inhabitants. The state that had the greatest number of hospital beds per population was Nevada. Fifteen states, Alabama, Arkansas, Georgia, Idaho, Indiana, Iowa, Kentucky, Mississippi, North Carolina, Ohio, Oklahoma, South Carolina, Tennessee, Texas and West Virginia, had fewer beds than Virginia per population.

At the same time there were in Virginia one physician for every 927 persons, one dentist per 3,173 inhabitants and one nurse per 464. The Research Council for Economic Security grouped all these factors under the head of medical facilities. In medical facilities Virginia ranked 35th among the 48 states. California ranked first and Mississippi ranked forty-eighth.

In 1920 the average occupancy of general hospital beds in the eight South Atlantic States was 65 per cent. Since then, in spite of increase in hospital facilities, there has been an almost continuous increase in percentage of utilization until in 1937 the percentage of occupancy reached 84. A number of reasons have been advanced to explain why the present hospital facilities have become inadequate. Increase of the urban population and over crowding is undoubtedly an important factor. In the average city home or apartment there is no room for a sick person. Another factor is the complexity of modern therapy. There was a time when most diseases were

treated in the home and much of the surgery was done there. Now with the various laboratory procedures and intravenous treatments that have become routine, it is necessary to have the patient in a hospital. Recent calculations of the United States Public Health Service of post-war hospital needs of the country, based on the assumption that 4½ beds are necessary for every 1,000 population in cities and 3 beds for every 1,000 people in the country, indicates that the country is short 100,700 general hospital beds. If such is the need in the country as a whole the need in Virginia must be very great for she ranks near the bottom of the list of states in respect to hospital facilities.

The New York Academy of Medicine Centennial Celebration

THE New York Academy of Medicine is one of the outstanding medical societies of the world. It is accustomed to doing things in a big way. It has one of the greatest collections of medical books to be found anywhere, and its treasures are readily available to scholars. The "History of Medicine Series" published under the auspices of its library is a splendid testimony of its stimulating influence. Number 3 of this series, "Andriae Vesalii Bruxellensis Icones anatomicae" is the most beautiful book we have ever seen. Vesalius', or rather Calcar's, original pearwood blocks were used. Some of the 400 year old blocks were warped. but one would never suspect it from looking at the impressions. Number 4, Janet Doe's "A Bibliography of Ambroise Paré" is a model of bibliographical research. Number 5 a modest little book by Robert Halsey, tells of the part that Thomas Jefferson played in establishing vaccination as a public health measure. An interesting feature of the library is its index of medical portraits. A card index is maintained not only of the Academy's collection of portraits, but also of all portraits in medical journals.

The present home of the New York Academy is the finest building of its character we know. The Academy's study of maternal mortality was the first of its kind and a model for the others that followed. There is no doubt but that it was a potent factor in the phenomenal reduction in maternal mortality that has occurred all over the country. A study of abortions that the Academy undertook resulted in the publication of the best little book on the subject. Its Committee of Public Health Relations has also attracted wide spread attention. The publications of the Committee on Medicine and the Changing Order, are worthwhile monographs on the social aspects of medicine, nursing and dentistry. The only criticism of this work is that some of the authors in this series are definitely red in their thinking and when they testify in Washington their testimony carries added weight because of their connection with the New York Academy of Medicine.

The New York Academy of Medicine is one hundred years old and as might be expected the Academy put on a great celebration. It began on March 6th with a banquet at the Waldorf-Astoria Hotel. There was an address by the Mayor of the City of New York. Dr. Baehr, the President of the Academy, spoke on "The Role of the Academy in the City and the Nation", and the Professor of Social Medicine of Oxford spoke on "Social Pathology and the New Era in Medicine". Later on in the evening there was a radio broadcast over the American Broadcasting Company's system on "A Century of Medical Progress". The celebration continued until April 28th with various Institutes and Sectional meetings, in each of which authorities from home and abroad took part. Lord Horder was the speaker at the dinner meeting of the Institute on Social Medicine. The Section of Obstetrics

and Gynecology had Walter Mount of Montclair, New Jersey, Joe Meigs of Boston, and Emil Novak of Baltimore. We learned that this Section is the oldest obstetrical organization in this country. Shortly after the founding of the Academy some eight or nine sections were formed, one of which was Obstetrics and Gynecology. Dr. Henry R. Viets of Boston spoke to the Section of Neurology and Psychology on the "Last Hundred Years of Neurology". The elaborate six page program shows that the Program Committee drew heavily from the faculties of Harvard, Michigan, Pennsylvania, Northwestern, McGill, Yale, Indiana, Cincinnati, Chicago and Hopkins as well as from the institutions of learning of Greater New York.

In addition to the special historical exhibits in the Academy Building, there were others in the Metropolitan Museum of Art, the New York Historical Society, the Museum of the City of New York, and the New York Public Library. All in all it was a celebration worthy of a great institution. The New York public should know by now that the medical profession is interested in its welfare.

Union Catalogue of Portraits

THE Army Medical Library News for April announces the establishment of a Union Catalogue of Portraits in the Army Medical Library. "It was begun in 1941 by combining in one alphabetical file subject cards for portraits in the Library of the New York Academy of Medicine, the John Crerar Library, the College of Physicians Library (Philadelphia), and the Army Medical Library. There are now approximately 60,000 cards in the catalogue.

"The information contained in this large reference file of portraits of persons in medicine and the related sciences is available to you either by personal visit to the Library or through correspondence.

"The Army Medical Library is interested in expanding its Union Catalogue of Portraits. To this end it invites medical libraries and associations which have portrait collections to send information about their collections. Please address letters to The Commandant, Army Medical Library, 7th Street and Independence Avenue, S.W., Washington 25, D. C."

This should prove a valuable addition to the service the Army Medical Library is rendering the physicians of this country. Most of us have many times wanted to find the whereabouts of a portrait of some medical worthy. Sometimes the Index Catalogue will give you the information and occasionally you can find it in the Index volume of the Annals of Medical History, but all too frequently your search is in vain. Now you will be able to locate it in the Union Catalogue if there be such a portrait.

Floral Eponym (50)

WEIGELIA

CHRISTIANUS EHRENFRIED V.WEIGEL, 1748-1831

v.Weigel was born the second of May, 1748, at Stralsund and died the eighth of August, 1831, at Greifswald. He was a doctor of medicine and was professor of botany and chemistry at the University of Greifswald since 1775.

Weigelia is a genus of very handsome flowering shrubs of the honeysuckle family. They are mostly May and June bloomers.

SOCIETIES

Accomack Medical Society.

Officers of this Society serving for the year 1947 are: President, Dr. Rooker J. White, Keller; president-elect, Dr. Henrik Shelley, Chincoteague; and secretary, Dr. James Corbin Doughty, Onancock, who has held this position for a number of years. At its meeting on April 9th, delegate and alternate were elected for the meeting of the Medical Society of Virginia in Roanoke, October 13-15.

Elizabeth City County Medical Society.

At its meeting on March the 17th, this Society elected Dr. Oscar W. Ward, Jr. as president, for the year beginning April 1, and re-elected Dr. Robert H. Wright, Jr. as secretary-treasurer. Both are of Phoebus.

Isle of Wight County Medical Society.

Dr. Ivan Steele of Windsor has been named secretary of this Society. Dr. Rea Parker of Smithfield is president. Dr. Steele fills a vacancy which has existed for sometime.

The James River Medical Society,

At its meeting on April the 16th, elected the following officers for two years: President, Dr. A. C. Whitley, Palmyra; vice-president, Dr. E. B. Nuckols, Cumberland; and secretary-treasurer, Dr. Garland Dyches (re-elected), Dillwyn.

Lynchburg Academy of Medicine.

At the April meeting of the Academy, Dr. Charles M. Caravati of Richmond spoke on "Clinical Jaundice", and Dr. T. Dewey Davis, also of Richmond, on "The Physiological Approach to the Management of Peptic Ulcer".

Roanoke Academy of Medicine.

The April meeting of the Academy was held at Hotel Roanoke on April 7, at which time Dr. A. J. Ballantyne of Glasgow, Scotland, gave an address on "Clinical Research and Medical Practice", and Dr. Chester S. Keefer of Boston, Mass., spoke on "The Choice of Chemotherapeutic Agents in the Treatment of Infection". Both of the speakers were in Roanoke at this time as guest members of the faculty for the Gill Memorial Hospital Spring Graduate Course. Following the meeting, members of the Academy and guests were entertained at a buffet supper in the ball room of the hotel by the staff of the hospital.

The Tazewell County Medical Society

Held a meeting at the new Jeffersonville Hospital in Tazewell on February 28th and, following dinner, the hospital was inspected by the members. In the scientific session, Dr. Richard C. Neale, formerly of Richmond, gave a talk on Plasma Protein. Dr. J. M. Peery and Dr. W. R. Strader, both of Richlands, are president and secretary.

The Warwick County Medical Society

Held its regular quarterly meeting at the James River Country Club on April 15th, with thirty-five members present. At the business session, Dr. I. F. Nesbitt of Newport News was elected to membership and delegates and alternates were named to the State Society meeting to be held in Roanoke in October. Dr. J. L. Thomson of Norfolk presented a paper on "The Surgical Treatment of Hypertension".

Wise County Medical Society.

Dr. Glenn T. Foust, Sr., entertained the Wise County Medical Society at dinner at Hotel Norton, on April 16th.

Dr. W. B. Barton, Stonega, long time Secretary of this Society, was elected degelate to the Grass Roots Convention of the officers of County Societies of the Nation to be held at Atlantic City on June 8th.

Dr. N. H. Short, Norton, was elected delegate to the State Convention in Roanoke in October and Dr. C. B. Bowyer, Stonega, alternate.

Dr. J. H. Hagy, Dr. Glenn T. Foust, Dr. C. H. Henderson, were appointed a Memorial Committee for Dr. T. E. Chapman who passed away on March 17th. There were 25 members present including visitors Dr. T. C. Andrew and Dr. Paul Rowiszer. There was a discussion by Dr. Frank E. Handy and Dr. C. B. Bowyer of the $25.00 annual State dues which was approved in principle with the expectation that the money will be spent.

Dr. John Robert Massie of the McGuire Clinic, Richmond, delivered an excellent lecture on "Varicose Veins" illustrated with pictures. Discussion and question period followed.

NEWS

American Medical Association.

Official call has been issued for the annual meeting of the Association to be held at Atlantic City, N. J., Monday, June 9th, through Friday, June 13th. This is its centennial year, the Association having been organized in 1847. The House of Delegates will convene at the Traymore Hotel on the 9th and Virginia will be represented in this by Dr. J. Morrison Hutcheson and Dr. H. B. Mulholland. It is expected that this will be the most largely attended meeting in the history of the Association.

Members and Fellows

According to the Director of Membership and Fellowship of the A.M.A., as of March 1, 1947, there were 72,243 Fellows and 131,590 members of the A.M.A. Some doctors still believe, erroneously, that by subscription to the Journal (which costs the same as fellowship) they become Fellows. Attention is again called to the fact that application has to be made for Fellowship.

Registration Identification Cards

As a matter of convenience, Fellows who wish to register attendance at the A.M.A. in advance rather than get in the rush for registration at the meeting, should send their requests to Mr. A. W. Stack, at A.M.A. headquarters, 535 North Dearborn Street, Chicago 10, Illinois, as soon as possible, as these identification cards will be mailed about thirty days ahead of the meeting.

Dr. Olin West Resigns as President-Elect of A.M.A.

Because of ill health, Dr. Olin West of Nashville, Tenn., has resigned as President-elect of the American Medical Association. This is noted with regret by the many friends of Dr. West, made during his long term of service as secretary and general manager of the Association until his retirement little more than a year ago.

Dr. Edward L. Bortz of Philadelphia, who was elected as vice-president at the San Francisco meeting of the A.M.A., succeeds Dr. West and will be inaugurated as President at the meeting to be held in Atlantic City in June.

New Member of State Board of Medical Examiners.

Dr. Carson L. Fifer of Alexandria has been appointed by Governor Tuck as a member of the State Board of Medical Examiners from the Eighth Congressional District, to succeed Dr. Chalmers Gemmill, resigned.

Personnel Changes, State Department of Health.

Dr. Walter R. Johnson has been appointed Health Officer of the Alleghany-Botetourt Health District, with headquarters at Covington, Virginia. He assumed his duties as of April 1.

Dr. Merle V. Bemis has been appointed Health Officer of the Buchanan-Tazewell Health District, with headquarters at Richlands, Virginia. He assumed his duties as of April 1.

Mr. George W. Jones, Jr., formerly an Assistant Director of the Hospital Division of the Medical College of Virginia, has been appointed to the staff of the State Department of Health to assist in the administration of the indigent hospitalization program. This program is being put into effect to carry out an Act of the last General Assembly providing for joint state and local participation in hospitalization of indigent patients. Mr. Jones assumed his duties as of April 15.

J. Shelton Horsley Memorial Lecture.

On Tuesday evening, April 22nd, the first of the J. Shelton Horsley Memorial Lectures was presented by the Richmond Academy of Medicine. This lectureship, established in memory of Dr. Horsley by his son, Dr. Guy W. Horsley, will take place each Spring at a regular meeting of the Academy and will present outstanding medical men in the fields of surgery, physiology and pathology.

Dr. Edward D. Churchill, the John Homans Professor of Surgery at Harvard Medical School, Boston, was the speaker, the title of his paper being "Historical Notes on the Management of Wounds of the Thorax". Dr. Churchill was surgical consultant in the North African and Mediterranean Theaters, and is the immediate past President of the American Surgical Association.

Medical College of Virginia News.

The following promotions have recently been made in the School of Medicine:

Dr. H. Page Mauck, Professor of Orthopedic Surgery and acting head of the department.

Dr. J. D. Reid, Professor of Bacteriology and Parasitology.
Dr. R. D. Butterworth from instructor to associate in orthopedic surgery.
Dr. Jack K. Finnegan from associate in to assistant professor of pharmacology.
Dr. Seymour Schotz from associate in to assistant professor of anesthesiology.
Dr. William R. Ray from instructor to associate in medicine.
Dr. Eric C. Schelin from instructor to associate in obstetrics.
Dr. J. B. Funkhouser from assistant to associate in neuro-psychiatry.
Dr. Merritt Foster, Jr., from assistant to instructor in neuro-psychiatry.
Dr. B. W. Haynes from assistant to instructor in surgery.
Dr. Julius C. Hulcher from assistant to instructor in otology, rhinology and laryngology.
Mrs. Louise L. Jones from assistant to instructor in anatomy.
Dr. Robert P. Meyers from assistant to instructor in urology.
Dr. E. L. Shelton from assistant to instructor in surgery.
Dr. Edwin Wortham from assistant to instructor in ophthalmology.

New appointments are:

Dr. Sydenham B. Alexander, assistant in medicine.
Dr. John S. Archer, Jr., assistant in otology, rhinology, and laryngology.
Dr. Robert G. Dunn, Jr., assistant in radiology.
Miss Mary Katherine East, instructor in biochemistry.
Dr. G. E. Forbes, Jr., instructor in medicine.
Dr. James T. Gianoulis, assistant in urology.
Dr. George R. Gish, Jr., assistant in neurological surgery.
Dr. William F. Grigg, Jr., assistant in pathology.
Dr. Nelson Hastings, assistant in neurological surgery.
Dr. William H. Higgins, Jr., instructor in medicine.
Dr. E. P. Irving, assistant in orthopedic surgery.
Miss Muriel Jones, assistant in bacteriology.
Dr. Henry G. Kupfer, fellow in clinical pathology.
Dr. Martin Markowitz, assistant in surgery.
Dr. Charles E. McKeown, assistant in medicine.
Dr. Jeffrey P. Moore, assistant in radiology.
Dr. E. L. Mrkvicka, Jr., assistant in ophthalmology.
Dr. Herman Nachman, assistant in surgery.
Miss Olga Petterson, research assistant in biochemistry.
Dr. Luke Query, Jr., assistant in medicine.
Dr. John E. Rayl, assistant in surgery.
Dr. A. Erskine Sproul, assistant in obstetrics.
Dr. William H. Talbot, instructor in pathology.
Dr. Karl K. VanSlyke, assistant in surgery.
Dr. Clyde Vick, assistant in surgery.
Miss Marion L. Wilkin, research associate in bacteriology and parasitology.
Dr. Robert M. Wilson, assistant in radiology.

Dr. William Minor Deyerle

Announces the opening of his offices for the practice of orthopedic surgery at 1100 West Franklin Street, Richmond.

The Richmond Drug Association,

Composed of doctors, pharmacists and detail men, their superiors and managers, has been organized in Richmond, with the following officers:

George Pollard, President
George Frank and
Warren Bridges, Vice-Presidents
Geo. B. Bowers, II, Secretary
A. O. Courtney, Treasurer

This organization meets once a month and has a guest speaker from the medical profession and the laity to discuss various problems. Detail men from other sections, temporarily in Richmond, are invited to attend the meetings, dates for which may be obtained from M. C. Thompson at Powers and Anderson, Inc.

Dr. J. U. Gunter,

Formerly of Roanoke, has received his discharge from the U. S. Naval Service and has established his permanent residency in North Carolina, where he will be connected with the Watts Hospital in Durham.

News from University of Virginia, Department of Medicine.

At the annual meeting of the Mid-Atlantic Section of the American Urological Association held in Washington, D. C., on March 20th, Dr. Samuel A. Vest, Professor of Urology, spoke on "Anuria and Tubular Lesions in the Kidney".

Dr. D. C. Smith, Professor of Dermatology and Syphilology, spoke on the "Early Treatment of Syphilis" before the Tennessee State Medical Association on April 8th.

On April 9th, Dr. Fletcher D. Woodward, Professor of Otolaryngology, spoke before the Tennessee State Medical Association on "Paralysis of the Larynx". He also addressed the Tennessee Academy of Ophthalmology and Otolaryngology on April 8th, on the "Treatment of Sinus Disease".

At the sixtieth session of the American Association of Anatomists held in Montreal on April 3rd, Dr. Carl C. Speidel, Professor of Anatomy, spoke on "Reinnervation phenomena as revealed by prolonged observations of vagus nerve stumps and associated sense organs".

St. Albans Sanatorium.

The staff of Saint Albans Sanatorium, Radford, held a staff dinner meeting on April 18th, at the Governor Tyler Hotel, with approximately 100 physicians attending. Dr. W. L. Powell, President of the Medical Society of Virginia, spoke briefly on pending medical bills in Congress and outlined the public relations program of the Society.

The guest speaker, Dr. James W. Watts, Washington, D. C., addressed the group on "Surgical Treatment of Mental Disorders".

The Virginia Orthopedic Society

Held its semi-annual meeting at University of Virginia Hospital and at Farmington Country Club on April 11 and 12, Dr. J. T. Tucker of Richmond, presiding. Dr. H. H. Wescott of Roanoke is secretary. On Friday evening, those attending were guests of Dr. R. V. Funsten for dinner at the Club. At this session, the subject for discussion was the Crippled Children's Bureau, and Dr. P. M. Chichester and Dr. Louise F. Galvin of the State Health Department took part in this program. The session at the Hospital on Saturday was in the form of a clinical congress. There was a full attendance for these sessions.

News from Duke University School of Medicine.

PROMOTIONS

Dr. J. W. Beard—Professor of Surgery in charge of Experimental Surgery.
Dr. N. F. Conant—Professor of Mycology and Associate Professor of Bacteriology.
Dr. W. J. Dann—Professor of Nutrition.
Dr. C. E. Gardner—Clinical Professor of Surgery.
Dr. Leslie B. Hohman—Professor of Neuropsychiatry.
Dr. W. H. Hollinshead—Professor of Anatomy.
Dr. D. S. Martin—Professor of Public Health and Associate in Medicine.
Dr. Hans Neurath—Professor of Biophysical Chemistry.
Dr. J. W. Everett, Associate Professor of Anatomy.
Dr. Hans Lowenbach—Associate Professor of Neuropsychiatry and Associate Professor of Physiology.
Dr. W. M. Nicholson—Associate Professor of Medicine.
Dr. E. L. Persons—Director of Student Health, Assistant Professor of Medicine, and Associate Professor of Public Health and Preventive Medicine.
Dr. Ralph Arnold—Assistant Professor of Otolaryngology and Ophthalmology.
Dr. Otto Billig—Assistant Professor of Neuropsychiatry.
Dr. K. L. Duke—Assistant Professor of Anatomy.
Dr. Grant Taylor—Assistant Professor of Bacteriology, Assistant Professor of Pediatrics, and Assistant Dean.
Dr. James G. Whildin—Assistant Professor of Radiology.

NEW APPOINTMENTS

Dr. George F. Sutherland—Visiting Assistant Professor of Neuropsychiatry.
Dr. F. L. Engel—Associate in Medicine.
Dr. M. Bolus—Instructor in Dermatology and Syphilology.
Dr. E. Bugg—Instructor in Orthopaedics.
Dr. J. B. Hickam—Instructor in Medicine.
Dr. J. Hitch—Instructor in Dermatology and Syphilology.
Dr. J. D. Myers—Instructor in Medicine.
Dr. Benjamin Skinner—Instructor in Pediatrics.
Dr. Charles Styron—Instructor in Medicine.
Dr. K. D. Weeks—Instructor in Medicine.
Dr. Walter Cargill—Fellow in Medicine.
Dr. J. E. Jacobs—Lecturer in Orthopaedics.

Dr. Siegfried Dratler,

Portsmouth, has been elected to Associate Fellowship in the American College of Allergists.

Dr. William L. Davis,

University of Virginia, class of '40, formerly in practice in Princess Anne County, has completed a three-year residency at Margaret Hague Hospital, Jersey City, and will now practice obstetrics and gynecology in Newport News. His office is at 3304 West Avenue.

Jane Todd Crawford Student Loan Fund in Gynecology.

The Woman's Auxiliary to the Southern Medical Association has established a loan fund as a memorial to Jane Todd Crawford for young Southern physicians wishing to pursue the study of gynecology. The applicant must not be over 32, of good character, and show evidence of being capable of absorbing adequate knowledge. The loan, of course, must be returned in small installments after completion of the study.

Several branches of this Auxiliary in the past have offered medical loan scholarships for undergraduates in medicine, but this seems to be the first postgraduate scholarship under the Woman's Auxiliary sponsorship. Inquiries may be addressed to Mrs. J. Ullman Reaves, 1862 Government Street, Mobile 18, Alabama.

Reference was made to this in the March MONTHLY in the Woman's Auxiliary Department.

For Sale—

New Stille stainless steel instruments.
Irrigating stand—2 basins, single percolator.
Gilbert portable O.B. bed.
Used steel commode chair.

Instrument cabinet, white steel.

Small safe, fireproof.

For further information, write No. 175, care this journal, 1200 East Clay Street, Richmond 19. (*Adv.*)

Wanted—

Assistant physicians for state mental hospital. Good salary. Full maintenance for single man. Brick cottage, telephone, water, lights, laundry for married. Replies confidential. Write Dr. Ira C. Long, Superintendent, State Hospital, Goldsboro, N. C. (*Adv.*)

Qualified Obstetrician,

Virginian, will consider proposal relative to association with an obstetrician or with a group. Replies treated confidentially. Address "Obstetrician" care this journal, 1200 East Clay Street, Richmond 19. (*Adv.*)

Wanted—

A young doctor for a junior partner; country practice; good salary plus commission. Address "Doctor", care this journal, 1200 East Clay Street, Richmond 19, Va. (*Adv.*)

For Sale—

GE X-ray, Model 1775; 30 ma; 85 KVP, table with Bucky; in excellent working condition. James P. King, M.D., Radford, Va. (*Adv.*)

Doctors Needed in Rural Communities.

Many inquiries have come to this office for doctors in rural communities. If interested in such, please communicate with this journal, 1200 East Clay Street, Richmond 19. (*Adv.*)

OBITUARIES

Dr. William Clyde West,

Alexandria, died April 1st. He was fifty-five years of age and a graduate of the Medical College of Virginia in 1920. Dr. West was formerly city health officer in Alexandria and was a past president of the Alexandria Medical Society. He had been a member of the Medical Society of Virginia since 1924. His wife and two children survive him.

Dr. Max Schoenbaum

Of Richmond died March 28th after a brief illness. He was born in Germany in 1882 and graduated from the Medical College of Virginia in 1905. After graduation, Dr. Schoenbaum practiced at Highland Springs and moved his home to Richmond about twenty years ago. He had been a member of the Medical Society of Virginia for thirty-eight years. His wife and two sons survive him.

Dr. Thomas E. Chapman,

St. Paul, died on March 17th, at the age of seventy. He graduated in medicine from the Kentucky University School of Medicine in 1904, and had for many years been an active and interested member of the Wise County Medical Society.

Dr. Arthur D. Knott,

Formerly professor of Preventive Medicine at the Medical College of Virginia and prominent in public health work, died on March 19 at Thomasville, Georgia, following a brief illness. He received his medical degree from Vanderbilt University in 1900 and, after service in World War I, matriculated at Johns Hopkins University Medical School, from which he received his degree of D.P.H. Upon leaving Virginia, Dr. Knott located at Parkersburg, W. Va., as Health Commissioner of Wood County. At the time of his death he was health officer of Mitchell County, Georgia. He was a former president of the West Virginia Public Health Association and a fellow in the American Public Health Association. He is survived by his wife and a daughter by a former marriage.

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BRIEF HISTORICAL NOTES ON MEAD'S CEREAL, PABLUM AND PABENA

HAND in hand with pediatric progress, the introduction of Mead's Cereal in 1930 marked a new concept in the function of cereals in the child's dietary. For 150 years before that, since the days of "pap" and "panada," there had been no noteworthy improvement in the nutritive quality of cereals for infant feeding. Cereals were fed principally for their carbohydrate content.

The formula of Mead's Cereal was designed to supplement the baby's diet in minerals and vitamins, especially iron and thiamine. How well it has succeeded in these functions may be seen from two examples:

(1) As little as one-sixth ounce of Mead's Cereal* supplies over 50% of the iron and 20% of the thiamine minimum requirements of the 3-months-old infant. (2) One-half ounce of Mead's Cereal furnishes all of the iron and 60% of the thiamine minimum requirements of the 6-months-old baby.

That the medical profession has recognized the importance of this contribution is indicated by the fact that cereal is now routinely included in the infant's diet as early as the third or fourth month instead of at the sixth to twelfth month as was the custom only a decade or two ago.

In 1933 Mead Johnson & Company went a step further, improving the Mead's Cereal mixture by a special process of cooking, which rendered it easily tolerated by the infant and at the same time did away with the need for prolonged cereal cooking in the home. The result is Pablum, an original product which offers all of the nutritional qualities of Mead's Cereal, plus the convenience of thorough scientific cooking.

During the last twelve years, these products have been used in a great deal of clinical investigation of various aspects of nutrition, which have been reported in the scientific literature.

Many physicians recognize the pioneer efforts on the part of Mead Johnson & Company by specifying Mead's Cereal and PABLUM—and also the new Pablum-like oatmeal cereal known as PABENA.

*Pablum, the precooked form of Mead's Cereal, has practically the same composition: wheatmeal (farina), oatmeal, cornmeal, wheat embryo, beef bone, brewers yeast, alfalfa leaf, sodium chloride, and reduced iron.

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Medical Society of Virginia
Roanoke, October 13-15, 1947
Annual Meeting

June 1947



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Virginia Medical Monthly

Vol. 74, No. 6.
WHOLE No. 1140.

RICHMOND, VA., JUNE, 1947

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SYMPOSIUM ON GENERAL PRACTICE

PEDIATRIC GOALS FOR THE GENERAL PRACTITIONER*

Basil B. Jones, M.D.,
Richmond, Virginia.

A large part of pediatric practice today is concerned with prevention of disease and for this part the general practitioner is in a peculiarly favorable position. He carries the mother through the pregnancy and so should be able to detect diseases which might harm the coming child as well as maternal abnormalities which might interfere with the birth. He can point to errors in nutrition and living, and help the mother develop proper attitudes towards nursing and caring for her child. These things are highly important for the mother and baby, and the general practitioner, who will carry on the care of the child later, will find this task facilitated by his earlier preventive treatment.

Nature attempts to provide the best possible nourishment for the new born infant, but now rarely succeeds in delivering the goods. A good many causes for this failure are apparent: Many mothers say frankly that they don't want to nurse their babies, and others rationalize with excuses that are more or less valid. Some mothers have very little milk and others have deformed nipples so that nursing is impossible. The separation of mothers and babies as practiced in hospitals tends to relieve the mother of her feeling of responsibility at the time this feeling should be strongest and when mother and babe would naturally be together becoming acquainted and getting the mother's breasts to functioning. Instead, it is too easy for mother, doctor, and nurse to follow the usual routine of New Born formula on the second day, and after a more or less perfunctory attempt at breast feeding, give up in favor of the formula. The fact that nature's plan for nourishing the baby is often flaunted needlessly, apparently causes little concern to too many physicians and nurses these days. It is this situation, which often affronts the convictions of the pediatrician, but nevertheless constitutes the primary reason for his specialty that calls him to the case. If he values harmony and good will more than airing his views, he will get to work quietly and try again to distort cow's milk into a formula which can be handled by the infant's digestive tract. The general practitioner should average better at breast feeding in his practice than the 10 to 20 per cent which often pertains in hospitals. There still will be a good many infants, however, who will have to be started early on a formula, and all should receive other foods and vitamines at appropriate times. The manufacturers of proprietary infant foods are doing their best to relieve us of the responsibility of having to figure out formulas, but unfortunately haven't succeeded completely. Until their success is complete we shall have to go on trying to keep up with the advancing knowledge of nutrition so that we can help our little patients build the best possible bodies.

Unfortunately, keeping up with the advancing knowledge of nutrition doesn't furnish us with the complete answer to infant feeding. The individual infant has likes and dislikes, tolerances and intolerances which must be reckoned with. Because these intolerances are so common, it seems logical to start

*Read as part of a Symposium on General Practice at the meeting of the Medical Society of Virginia at Virginia Beach, October 14-16, 1946.

each new food or vitamine separately so that any resulting disagreement may be detected and blamed on the real offender. Regurgitation, gas, colic, diarrhea, constipation, skin eruptions, chronic stuffy nose, and cough, repeated colds and bronchitis, restless and sweaty sleeping, stuttering, nervousness, minor convulsions, anorexia, etc., often are due to food allergy. When one or more of the so-called essential foods are at fault, adequate substitutes must be provided if the symptoms are to be relieved and proper nutrition be maintained. Because of the limited diet in infancy, detecting the offenders by elimination is often successful. Cow's milk, orange juice, fish liver oils, eggs, and spinach, approximately in this order, seem to be the chief offenders in infancy and the first four often continue this role into later years. Some infants can take one carbohydrate and can't take another which chemically approximates it closely. Some can tolerate a high percentage of soluble carbohydrate and some very little. Similarly, some small infants can tolerate less than 1 mgm. of ascorbic acid per dose because of colic, and dire threats of scurvy may be necessary to force the mother to continue its use until better tolerance has developed.

Preventive measures are available for many of the diseases most dreaded in times past. The general practitioner has the same sources of information concerning these that the pediatrician has and should be equally interested in following developments in this field. At this time I still prefer to give whooping cough vaccine alone in three doses, and recently have begun giving it to infants about the third month if the diet is properly adjusted. Diphtheria and tetanus combined toxoids come next and are probably better given after the sixth month and before twelve months of age, in two injections, two to three months apart. The Schick test and smallpox vaccination I give preferably about the eighteenth month. Typhoid and Rocky Mountain spotted fever vaccines are not given routinely but are available when needed. For scarlet fever, meningococcic meningitis, etc., small doses of a sulfa drug or oral penicillin seem effective, and are simpler to administer than any serum that might be available. For measles, immune globulin given after exposure is the choice now.

As life is more than food and drink, so is proper child care more than the provision of proper nourishment and the prevention or cure of infectious diseases. Endocrine and metabolic disturbances occur at times and must be recognized and treated properly if the child is to develop into a healthy and adequate adult. Progress is being made steadily along these lines but much still remains unknown to spur on further research. Finally, the child as an individual must develop properly both mentally and emotionally if he is to live a life worthwhile to himself and to the community. Proper nutrition and the prevention or cure of diseases contribute mightily but do not immunize the child completely to emotional shocks and frustrations, nor to the warping effects of constant association with significant individuals, who are inadequate, brutal, or abnormal. A child needs to feel wanted, loved and secure, as much as it needs proper food. He can be badly upset because his mother takes a job which seems to him a personal rejection, and may be made unhappy and ill because she brings from the hospital a new baby to monopolize her attention and relegate him to the side lines. The pediatrician or general practitioner should be able to recognize situations like these which are potentially dangerous both to the physical health and to the emotional development of the child. He should feel that with this recognition come the opportunity and the obligation to help the parents chart the best course possible under the circumstances.

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CAN OBSTETRIC CARE BE IMPROVED?*

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A substantial decrease has been made in the maternal mortality rate in Virginia during the past ten years.

Supervision of patients during the prenatal period is accepted as a major factor in the reduction of the incidence of toxemia. A trend to earlier hospitalization and prompt institution of medical rather than immediate radical methods of treatment have been contributing factors in obtaining better results in the management of this disease of unknown etiology.

Recent chemo-therapeutic advances, a more universal use of hospitalization, a more general but wiser administration of blood by transfusion, and less promiscuous invasion of the uterus have played a part in the prevention and treatment of puerperal infections.

Less spectacular advances have been made in meeting situations created by obstetric hemorrhage. There has been an earlier recognition and treatment of ectopic pregnancy, a keener differentiation of placenta praevia and premature separation of the placenta, and more pre-arranged plans for delivery in cases of disproportion in multipara and in borderline primipara. In addition to whole blood, the ready access to and the easy administration of plasma are among the greatest of the agents for sparing the lives of patients with hemorrhage.

The gradual reduction of the maternal death rate to its present level of 2.2 per one thousand live births indicates that progress has been made: CHART I. There must have been a great deal of the right kind of work done in order to have had a continual decline in the death rate. Many maternal deaths cannot be prevented; it may be that the number of non-preventable cases has run as high as one-third of all maternal deaths.

To maintain the gains that have been made and to reduce maternal mortality and morbidity to a lower level, certain statements are being made, based upon a survey of 607 consecutive maternal deaths in Virginia. These deaths covered the time from December, 1939, to May, 1942, which was near the middle of the ten-year period.

The necessity of prenatal care must be stressed. Three hundred and eighty-five, or 63 per cent, of the 607 maternal deaths had no such care. All doctors are aware of the value of this supervision but many patients fail to realize its importance. Definite benefits may be obtained by heeding the first signs of toxemia of pregnancy. When any of those things appear, observe that patient religiously for progressive changes; she may be a mild pre-eclamptic; she may be in the chronic cardio-vascular-renal

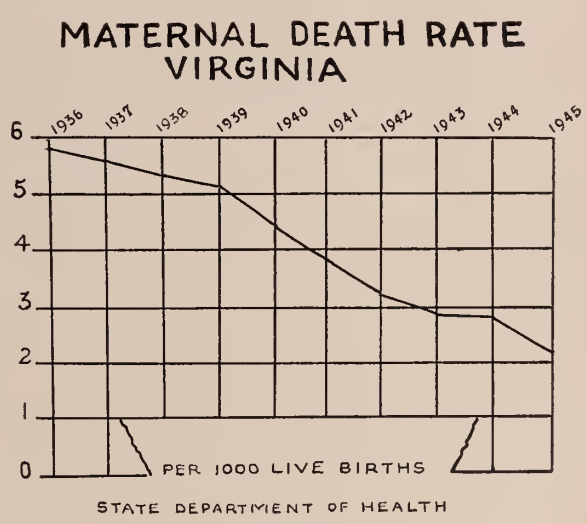


CHART I

group; or she may progress rapidly to the critical stage of severe pre-eclampsia or eclampsia. The mild pre-eclamptic may respond to simple measures, such as a salt-restricted, high protein diet and curtailment of activities, and then carried to term with rigid observation. Hospitalization and consultation are indicated for the patient with cardio-vascular-renal damage to determine whether the pregnancy should be terminated.

Based on the study of maternal deaths, certain statements, whose observation may be life-saving, can be made in regard to the treatment of eclampsia. The chances are that a patient in the last trimester

*Read as part of a Symposium on General Practice at the meeting of the Medical Society of Virginia at Virginia Beach, October 14-16, 1946.

of pregnancy with convulsions is an eclamptic. This statement is based on the fact that the most common diagnosis is the most likely. These are hospital cases. Regardless of what the later treatment may resolve itself into, the pregnancy should be disregarded for the time being and the patient treated conservatively until some radical measure is indicated because of failure of conservatism. It can be stated correctly that it is unwise to attempt immediate delivery by such methods as manual dilation of the cervix, the use of forceps with the cervix incompletely dilated, oxytocics, or caesarean section. These statements are being made for the reason that delivery does not always correct the eclampsia. A less important reason is that further injury may be added to a patient already in a critical condition. Ninety-three of the 607 maternal deaths were due to eclampsia.

The time may be approaching when infection may be one of the minor causes of puerperal deaths. Recent advances made in reducing infection as one of the major factors has been due to a more rigidly observed technique in delivery as well as in the use of recently discovered drugs. The promiscuous use of sulfa drugs should be classed as an unwise procedure. While the sulfa drugs have undoubtedly played an important part in the prevention and control of infection, their use should not encourage deviation from time-honored techniques whose value is accepted without question. Their availability should not magnify the indications for operative procedures. It should be remembered that the use of sulfa drugs is not entirely without danger since agranulocytosis, hemolytic anemia, hematuria, and crystalluria are conditions which may follow. Penicillin, with a wider margin of safety, has reduced somewhat the extensive use of the sulfa drugs. Streptomycin offers additional promise but its indications and limitations have not been determined definitely. It is possible that it will be valuable in combating some of the infections not reached by the sulfa drugs or penicillin. The prevention of puerperal infection is both more important and more efficacious than the cure.

One hundred and thirty-three of the 607 maternal deaths studied were due to hemorrhage. Placenta praevia and postpartum hemorrhage were responsible for 70 per cent of those deaths.

Thirty-four of the 133 hemorrhage deaths showed placenta praevia to be the primary cause. The study indicates that the most common fault in the management of these cases was the failure to consider this type bleeding as a serious matter. Bleeding in the later months of pregnancy points often to placenta praevia. It is rare that death occurs at the time of the initial hemorrhage but may follow a second episode a short time or weeks later. Because of the potential danger of having a fatal hemorrhage occur, neither vaginal nor rectal examinations should be made until the patient is hospitalized and preparation is made for transfusion as well as for any emergency operative procedure. It is believed that wholesome respect for antepartum vaginal bleeding will contribute to a decrease in maternal mortality.

Fifty-nine of the 133 hemorrhage deaths were due to postpartum hemorrhage. The best treatment for the control of postpartum hemorrhage is prevention. Granting that the case has been managed properly through the third stage and has been guarded rigidly for the conventional one-hour-postpartum, a definite number of postpartum hemorrhages could be prevented if the patients were checked frequently for evidence of bleeding for a twenty-four hour period.

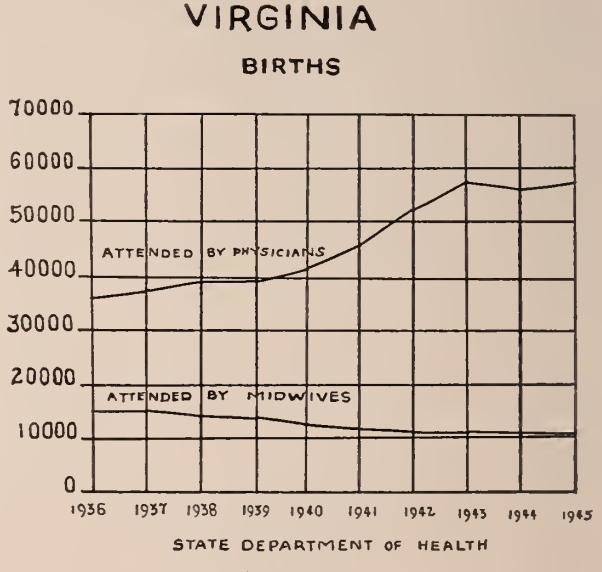


CHART II

Following the immediate control of hemorrhage, by whatever method indicated, it is essential that blood loss be replaced as early as possible. This may be accomplished by the immediate use of plasma followed by whole blood. Hemorrhage exposes the patient not only to the immediate danger of death

from blood loss but to the additional risk of the possibility of infection. Invasion of the uterus is always a hazard; re-invasion is doubly so. It is of little avail to save the life of a patient by controlling hemorrhage and replacing blood, and then have her die of sepsis.

The increase in the number of deliveries in Virginia during the past few years has been accompanied by a corresponding increase in the number of deliveries done by physicians, as shown by CHART II. It is to be noted that midwives play a gradually decreasing role of importance.

The increased load and the decreased number of available physicians demanded a service the provision of which was impossible in the home. It is to be noted that with the increased number of deliveries by physicians and the decreased number of deliveries by midwives there has been a definite shift to the hospital to meet this demand on the time of the physicians.

Ten years ago 9,119, or 17.8 per cent, of the deliveries in Virginia were in hospitals; last year 40,194 or 60.5 per cent of the deliveries were in hospitals. The increase in hospital deliveries is shown by CHART III.

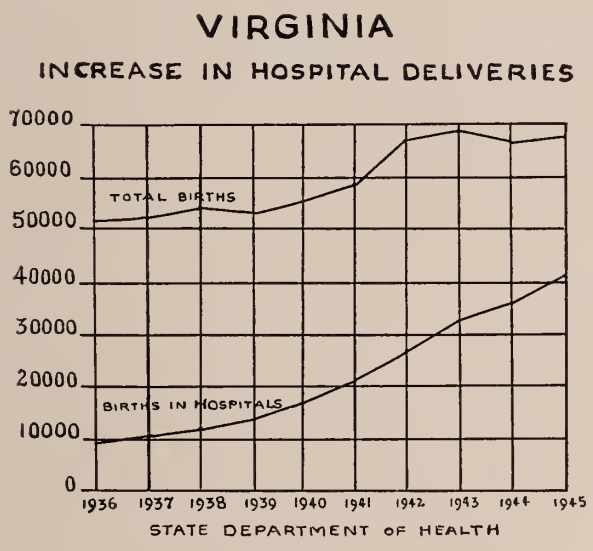


CHART III

The advantages of the hospital as a place for delivery may not have been an unfavorable discovery since the mortality rate has continued downward during the recent emergency.

Forty-eight thousand and two, or 72.3 per cent, of the 66,362 births recorded in Virginia during the past year were attended by general practitioners. The trend of hospitalization may be indicated by the fact that 32,111, or 66 per cent, of the deliveries by general practitioners were in hospitals.

Various factors have contributed toward the increased demand for obstetric care in hospitals. Among these are insurance plans, federal, state and local hospitalization programs, increased incomes, improved facilities offered by hospitals in contrast to inconveniences at home, an urge to keep up with the neighbors, less prejudice against hospitalization, inability to secure the services of physicians at home, and a desire on the part of physicians to avail themselves of better working conditions.

Included in the above are facilities whereby provision may be made for medically indigent obstetric patients with pathology. The increased use of hospital facilities has promoted a general feeling that consultation, more easily obtained, may be an advantage.

Can obstetric care be improved? The record, as expressed by the maternal death rate, shows that this has been done. A further reduction in the number of deaths will require greater effort directed toward those things which have been credited with that improvement. The rate, instead of going from high to low, must go from low to lower.

SUMMARY

Prenatal care is an important factor in the management of obstetric patients. Maternal deaths due to toxemia, infection and hemorrhage have been reduced. Early detection and conservative treatment of toxemia have been effective and should be continued. Chemo-therapy, plasma and whole blood are being used more wisely. Bleeding at any time should not be disregarded. The probability of having bleeding occur after delivery should be guarded against over a longer period. The general practitioner attended 72.3 per cent of deliveries in Virginia in 1945; 66 per cent of these were in hospitals. A greater number of deliveries in hospitals has been time-saving for the physician and has provided better care for the patient.

628 State Office Building.

NEUROPSYCHIATRY AS IT RELATES TO THE GENERAL PRACTITIONER*

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The challenge to the physician in general practice is as great as in any specialized field of medicine. The program today suggests some important fields in which special knowledge, interest and training are desirable, namely, in the fields of pediatrics, obstetrics, cardiology, diagnostic medicine and neuropsychiatry.

The subject of psychiatry in medical schools has slowly assumed a more prominent place in the curriculum. The more recent graduates are better grounded in dynamic psychiatry and in the interrelations of mind and body. The recently returning physicians from the war have been strongly impressed by the relation of stress, home-sickness, fatigue and emotional problems to mental well-being and to physical symptoms.

One entering private practice anticipates being largely concerned with diagnosing and treating physical disease. He finds that in over a third of the patients the complaints do not have a demonstrable physical basis and that in another third the physical symptoms can be accounted for in part only by the disease actually present. One sees, on the one hand, only a small number of psychotic persons and, on the other, one sees a larger number who are ill because of actual physical disease. There is a much larger number who have complaints not justified by the demonstrable pathology. Yet they are not psychotic. In these, psychological or emotional factors will have added to or distorted the physical.

The abnormal personality is a deviation from the normal. One lives in a relative state of adjustment. The picture a patient presents to the outsider by no means reflects what is going on within. The term "personality" is derived from the word "persona", meaning "mask". The personality is what the other person sees. The normal personality has been defined as being (1) free of symptoms, (2) unhampered by mental conflict, (3) having a satisfactory working capacity, and (4) being able to love someone else other than himself.

A mental disorder is the sum of many conditions, the end result of a long chain of processes. The infant enters the world with a certain constitutional endowment. The etiological factors in mental illnesses are not obscure, but they are many.

Among predisposing causes we have heredity, the life period in which the patient happens to be, environmental strain, occupation, race, and the presence of previous attacks.

Among exciting causes we have physical factors such as infection, toxicity, exhaustion, endocrine disorders, metabolic deficiencies, and chronic infections.

Certain unfavorable personality features may play a role such as unhealthy reaction habits, discrepancy in ambition and ability, emotional immaturity, inadequate social outlet, inability to give and take, rigidity of attitude and poorly utilized personal assets.

Of great importance are the situational factors. Some of these are competition, religious problems, marital problems, conflicts of various kinds, and reaction to physical handicap.

Just as important as some of the factors just mentioned are some childhood factors, such as overprotection, particularly by the mother, rejection by the parents, sibling rivalry, insecurity, and, by no means least, the problem of the broken home and divided loyalty.

Psychotherapy is the means that we utilize in treating the sick personality. Psychotherapy may be divided into simple methods for the general practitioner, advanced methods for the general practitioner, and methods for the specialist. Of the simple methods, many are used routinely in general practice. One must appreciate that psychiatric treatment of the patient starts at the first contact. The simple methods include physical examination, physical and medical treatment, reassurance, hydrotherapy, occupational therapy, establishment of daily routine, of hobbies, the use of authoritative firmness, suggestion, etc. It includes manipulation of the environment so as to remove external stress, guidance, and the providing of acceptable outlets for aggression. There is an abundant opportunity in general medicine for the spreading of principles of mental hygiene.

*Read as part of a Symposium on General Practice at the meeting of the Medical Society of Virginia at Virginia Beach, October 14-16, 1946.

The more advanced methods may be used by those who have special interests and training or aptitude. These include a deeper psychological investigation and personality analysis. The process of talking in the presence of a sympathetic and understanding person is itself therapeutic. The laying bare of the conflict, the acquiring of insight, the fuller understanding of one's self, all are therapeutic. One may utilize the discussion of life history, desensitization, persuasion, and re-education.

Some of the psychiatric disorders more commonly met with in the general practice of medicine are anxiety states, depressions, toxic organic reactions, and more purely organic reactions. I shall speak briefly concerning these.

Anxiety is a rather universal symptom and ordinarily is not severe enough to be very handicapping. The symptoms consist of an internal uneasiness, a fear of danger from within, of illness, or death, or impending danger. The patient will be seen with rather acute and transient anxiety attacks lasting from a few seconds to an hour or more, associated with palpitation, precordial discomfort, perspiration, difficulty in breathing, giddiness, perhaps diarrhea and frequency. Various associated physical symptoms may appear, such as cold clammy hands and feet, dry mouth, and blood pressure changes. This is one of the forms of psychoneurosis. The proper approach is not by exhorting the patient to stop worrying or to get hold of himself. Small doses of barbiturates, such as barbital grains 1½ two to four times a day, may be useful. Physiotherapy in the form of a warm sedative tub of one or two hours' duration in the evening is often helpful. It is most profitable, however, to take such time as might be necessary to perform a careful physical examination plus necessary laboratory work to rule out physical disease. Along with this one should obtain a careful history, bearing in mind that this anxiety state is an expression of dysfunction of the whole person. Environmental factors should be examined. The patient should be viewed from the longitudinal standpoint as well as from the standpoint of the cross-section at the time of his most recent problem. With the more full understanding that is derived, one then proceeds much more efficiently with such general measures as ventilation, suggestion, reassurance, and re-education.

Perhaps the condition imposing the most responsibility in general practice and the most difficult to evaluate properly is depression. Ten per cent of the cases admitted to the Colorado Psychopathic Hospital were depressions and 20 per cent of the cases seen in the Colorado General Hospital by the psychiatric personnel were depressions. A person is depressed when he is blue, despondent, dejected, and pessimistic. A certain amount of depression is normal as a reaction to an unfavorable situation. Depression appears in involutional melancholia, cerebral arteriosclerosis, manic-depressive psychosis, psychoneurosis, and there is ordinary grief in response to the death of a loved one. Some, particularly those up in middle-age and later, tend to be agitated and restless but the more pure depressions, particularly in younger people, tend to be slowed up in thinking and acting, showing what we term psychomotor retardation. They tend to complain. Hypochondriasis is prominent with vague complaints all the way to more marked manifestations of depersonalization, such as numbness, feeling that circulation has stopped, that one has turned to stone, etc. Dr. Ruth Fairbanks found that of 100 patients who attempted suicide 73 per cent were depressions.

In the management of these patients one should take no risks but early recommend hospitalization. In depressions the super-ego is overly strict, so one should avoid criticizing them, or telling them to buck-up, or giving them anything unnecessary to worry about.

There are so many depressions of a mild nature that they will have to be and they are well handled in general practice in a large number of instances. Hospitalization should be urged when the patient might be considered as potentially suicidal, when the environment is unfavorable to recovery, when the depression appears to be becoming fixed and stereotyped, or when he has become a nursing problem, particularly from the standpoint of eating.

A specific form of treatment has developed in the past few years, namely, electro shock or metrazol shock. These two methods produce convulsions, and in from 80 to 90 per cent of the patients the depressive reaction is markedly ameliorated or relieved entirely. It is recommended that the patient not be permitted to suffer too long without considering seriously electro shock therapy.

As regards toxic organic reactions, a good many are undoubtedly seen in general practice. These are chiefly the delirious reactions and are characterized by clouding of consciousness, drowsiness, partial or

complete disorientation, dream-like states, appearance of rather vivid hallucinations and illusions, considerable fear and suspicion. They tend to be caused chiefly by exogenous toxins such as alcohol, opiates, bromides, barbiturates, etc., by chronic infections in malnutrition or deficiency states, in metabolic disorders, and as part of an organic reaction. The treatment, of course, is directed along medical lines. The duration is quite often rather short, the condition clearing up within a few days with proper eliminative, supportive, and sedative measures. I cannot recommend too strongly that some provision be made in general hospitals for the care of psychotic patients, particularly of this type. Another type where such provisions would be very helpful would be for those who develop psychoses following pregnancy or within the first few days following operation.

Among the organic reaction types the more usual conditions are syphilis, arteriosclerosis, and senility. The paretics make up nearly 10 per cent of the admissions to the state hospitals. With more adequate early treatment these patients are being discovered much more frequently while they are still in the asymptomatic stage. These and those who are not too psychotic can be treated in general hospitals. Leaving out for the minute the matter of penicillin, the best treatment has been one of the forms of fever, either malaria or artificial fever, followed by a pentavalent arsenical, such as tryparsamide or aldersone. With these forms of treatment one can expect among those who have become psychotic a remission rate of one-third and an improvement rate of one-third. Malaria can very well be given in a general hospital. The relative value of penicillin treatment is still to be determined. It is quite possible that the ultimate treatment will be all or some combination of all three, penicillin, fever, and arsenicals plus bismuth.

The general practitioner will be continually meeting many misconceptions among his patients, and the correction of these will be of much help. Some of these are mentioned.

1. That heredity is the chief cause of mental illness. Heredity is of more serious import in certain organic brain defects, in feeble-mindedness, and when the family history is heavily loaded, one might say, with psychopathy. Patients, particularly those who have reached adulthood well adjusted, can be reassured.

2. That masturbation causes insanity. This is a physiological phenomenon and should be explained as such. It may play a part in causing mental trouble when the child has been influenced to worry or has become morbid about it. Introspection and a schizophrenic development might be initiated with excessive autoerotism of which masturbation is only part of the withdrawal from healthy external interests.

3. That over-work causes psychoses. It is rare that this is true. Over-working might be a symptom, as in a hypomanic, or in an anxiety state or in a compulsion neurosis. To a certain point overwork will be therapeutic but if not sensibly combined with adequate recreational outlets, rest and food, trouble may result.

4. That day-dreaming is a dangerous type of activity. Schizophrenia represents a withdrawal from reality into excessive phantasy. We distinguish between autistic thinking, too much of which is destructive, and realistic thinking which is constructive. Some of the autistic is all right but in excess is unhealthy. So we encourage a book worm and dreamer to externalize his interests, not to the point that is uncomfortable but reasonable for his particular personality.

5. There are many misconceptions and fears in connection with pregnancy. The fear of the ordeal of labor is built up from early childhood by allusions of mothers and others to "what mothers go through" and there is an air of mystery around the whole subject of sex. There is fear of loss of freedom as the children are added. There may be fears as to various defects in the coming child, of transmission of criminal or other tendencies, concern about the old notion of "maternal impressions". A prospective mother was worried that she must control her anger. The additional repression resulting from the effort to conform was the last straw in causing a puerperal psychosis. In some cases resentment against the husband, child or even herself occurs.

There are numerous other fears in connection with pregnancy. Re-education concerning the facts of pregnancy can do a great deal in overcoming these unnecessary and handicapping fears and notions.

In closing, I can do no better than quote the late Louis Hamman, that peer of modern diagnosticians, who wrote: "If a physician is once persuaded to look within himself to learn to identify unaccount-

able variations in mood and energy as the analogue of a manic-depressive cycle, the habit of ascribing failure and disappointment to ill luck or persecution as the promptings of paranoia, day-dreams as the harmless whisperings of schizophrenia, certain exaggerated reactions as the masks for day-dreams and inadequacies, various somatic symptoms as excuses for retreat from difficult or unpleasant situations, he will forever after have an enduring interest in psychiatry."

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HYPERTENSIVE VASCULAR DISEASE—ITS EVALUATION AND MANAGEMENT*

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Definition: Hypertension may be defined as the persistent elevation of systolic and diastolic blood pressure resulting from increased peripheral resistance. Elevation of systolic blood pressure alone, which occurs in arteriosclerosis, hyperthyroidism, or complete heart block, does not fit in with this definition and will not be discussed here.

Classification:

1. Essential
   a. Benign
   b. Malignant
2. Hypertensive Toxemia of Pregnancy
3. Renal Hypertension
   a. Glomerulonephritis
   b. Polycystic renal disease
   c. Pyelonephritis
   d. Renal artery occlusion
   e. Coarctation of the aorta
   f. Perinephritis
4. Miscellaneous
   a. Adrenal and pituitary tumors
   b. Increased intracranial pressure
   c. Physiological—due to pain or emotion.

PHYSIOLOGY OF HYPERTENSION

Regulation of the normal blood pressure is determined[1] by:

1. The pumping action of the heart.
2. Peripheral resistance.
3. Volume of the blood.
4. Viscosity of the blood.
5. Elasticity of the arterial walls.

All of the above factors have been found to be unchanged in uncomplicated hypertension except the peripheral resistance which is increased, and this produces elevation of systolic and diastolic blood pressures.[1] The peripheral resistance depends to a large part on the caliber of the arterioles, constriction of which vessels decreases their caliber and increases the resistance. This decrease in caliber may result from:

1. Narrowing due to organic change.
2. Hyperactivity of the vasomotor nerves.
3. Hypertonicity of the arterioles produced by some unexplained mechanism.

This latter mechanism is probably the fundamental abnormality which produces the elevation of the blood pressure in hypertension. No doubt other factors contribute to this just as they do in normal individuals but their effect is contributory only.

The cause of the arteriolar hypertonus is at present not known. It is thought to be humeral in nature; that is, some vasoconstrictor agent is probably circulating in the blood stream in greater than normal quantities. Its origin, in fact, its existence is theoretical. There is good evidence, however, that such a substance is present in the blood of animals

*Read as part of a Symposium on General Practice at the meeting of the Medical Society of Virginia, at Virginia Beach, October 14-16, 1946.

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made hypertensive by renal ischemia and that this substance is of renal origin.[2a] Renal ischemia has been demonstrated in hypertensive individuals also, but this is thought to be secondary rather than primary.[3]

Since a normal peripheral blood flow is maintained in hypertension,[4] the force of the heart beat must be increased to effect this.

PATHOLOGICAL EFFECTS PRODUCED BY HYPERTENSION:

A. Cardiac—enlargement of the left ventricle.

B. Arteriolar damage.

C. Renal damage.

A. *Enlargement of the left ventricle* occurs as a result of increase in length of the individual muscle fibers. Later the ventricle dilates and failure supervenes. Right ventricle hypertrophy and dilatation follow. Coronary sclerosis and myocardial degeneration are often associated.

B. *Arteriolar damage* occurs as a result of work hypertrophy of the intima, the elastica, and the media. The lumen is narrowed and sometimes obliteration follows. Arteriolar damage may be diffuse but is usually most marked in the kidneys. In some instances, necrotizing lesions occur and the so-called malignant phase develops.

C. *Renal Damage.* The principal lesion of the kidney is that involving the afferant arterioles whose intima becomes thickened, resulting in decrease in the blood supply to the glomeruli. These collapse, become fibrosed and the tubules subsequently atrophy. This process develops in patches, renal units disappear and are replaced with scar tissue. The remaining units hypertrophy and alternate with areas of scar tissue throughout the kidney. The kidney subsequently becomes contracted and the surface irregular.

When the malignant phase of hypertension occurs, areas of arteriolar necrosis appear, and subcapsular hemorrhage may result. This process is rapid and interferes with renal function to a much greater degree than in benign hypertension.

Relation of Human Hypertension to Experimental Hypertension: Hypertension has been produced in the laboratory by several methods, but the ones most commonly used are as follows:

1. Removal of a portion of renal tissue.[5]
2. Constriction of one or both renal arteries.[6]
3. Production of perinephritis.[7]

The last two methods are associated with the production of renal ischemia without the development of renal insufficiency. These methods thus produce a type of hypertension which is similar to clinical essential benign hypertension, and one sees occasionally in humans hypertension which is probably produced in a like manner.[8] The vast majority of patients with hypertension do not have renal arterial occlusion perinephritis or are subject to the other conditions produced in experimental animals.

As mentioned previously, even though renal ischemia exists, it is probably secondary to hypertension and not a causal factor.

One can only state that there is no known relationship between experimental hypertension in animals and essential hypertension in humans.

CLINCAL CHARACTERISTICS

Hypertensive vascular disease is one of the great killers of man; in fact, between the ages of 35 and 44, it accounts for about 25% of the total death rate and between the ages of 65 and 74, it probably constitutes 60% of the total death rate.[9]

Family Incidence: It is a well known fact that hypertension "runs in families," and most of us know of such families whose members die as the result of this disease. Ayman found that 28.3% of children in families with one hypertensive parent and 45.5% of the children in families with two hypertensive parents have high blood pressure, while only 3.1% of the children with normatensive parents develop the disease.[10] Hines states that a family history of hypertension is five times more frequent in hypertensive individuals than in normal persons.[11] He believes that hypertension is inherited as a dominant trait.

Pre-Hypertensive State: Many individuals are found to have elevation of blood pressure at times while at other times these same people have normal blood pressure. These individuals are more apt to develop hypertension at a later date.[12] They are pre-hypertensives, having elevation of blood pressure only when under some emotional or physical stress. Later, the blood pressure elevation is sustained and they are victims of hypertensive vascular

disease. Unfortunately, there is no practical advantage to early diagnosis since there are no preventative or curative measures that can be instituted.

Clinically, symptoms actually produced by hypertension depend on the underlying pathology of the disease. Therefore, it appears best to discuss briefly the clinical manifestations of the pathological processes.

Eyes: The arterioles are diffusely involved and changes in these are responsible for symptoms referable to the eyes. Retinal changes can be easily seen with the ophthalmoscope. Spasm of the arterioles occurs first. This may be seen as localized areas of narrowing associated with irregularities in the light streak. The light streaks later become accentuated, due to thickening of the walls of the arterioles, accompanied by tortuosity and acute branching of these vessels as well as compression of the veins at the points of crossing. Flame-shaped and punctate hemorrhages later appear, associated with the presence of exudate, due to obstruction of small vessels, with resulting lipoid degeneration. Finally, edema of the disc and of the retina appear. This usually indicates that the vascular disease is far advanced. It should be emphasized, however, that there is not always a close correlation between the degree of eye ground changes and the state of advancement of hypertension. Occasionally, one will see advanced retinal changes in an individual who has a relatively benign hypertension, while individuals with advanced nephrosclerosis may die in uremia with minimal changes in the retinae.

Generally, however, the individual who has papilledema, spastic thickened arteries, hemorrhage, and exudate has far advanced disease.

Eye symptoms depend on where hemorrhage and exudate occur in the retinae. Changes which encroach on the macula will produce visual disturbances, while similar changes in other areas produce no noticeable visual defect.

Brain: Headache is a symptom which occurs commonly in individuals who also have hypertension. The typical hypertensive headache is said to be throbbing in character, frontal or occipital in location, and is characteristically present in the morning on arising. Many types of headache occur in these people just as they do in any group of individuals who are chronically ill. Some resemble migraine, some are localized in one part of the head, and some are diffuse. The exact relationship between these headaches and hypertension is not clear but no doubt some are due to localized angiospasm, cerebral edema, or increased intracranial pressure.

Cerebral thrombosis is apt to develop slowly. Often the individual is merely disoriented for several days. At other times, he may wake up in the morning with hemiplegia or hemiparesis. Some degree of return of function usually follows.

Cerebral hemorrhage is usually more dramatic. It occurs suddenly without warning, and is often associated with immediate unconsciousness, followed by nausea, vomiting, convulsions, and Cheyne-Stokes respiration. Death often occurs in 24 to 48 hours, but sometimes the individual survives the attack and is left with permanent cerebral damage with symptoms referable to the area involved.

Hypertensive encephalopathy not infrequently occurs during the course of hypertensive vascular disease. An individual then develops signs of cerebral ischemia which may be manifested by the occurrence of sudden severe headache, nausea and vomiting, followed by convulsions, unconsciousness, and transient hemiplegia. Any combination of the above symptoms may occur and may be very mild to very severe. The episodes usually last from a few hours to a few days and clear up completely. The attacks are generally forerunners of cerebral accidents such as thrombosis or hemorrhage which produce permanent damage.

Subarachnoid hemorrhage is an unusual result of hypertension. Then, an individual suddenly develops headache and sometimes becomes unconscious. Signs of meningeal irritation, elevation of temperature, and leukocytosis occur. Focal signs rarely develop.

Heart: Heart disease is a common cause of death in hypertension. A compilation of the statistics of six groups reveals that of 1264 cases,[9] the causes of deaths of patients with hypertension are as follows:

Heart disease	66%
Cerebral vascular accident	14%
Uremia	8%
Miscellaneous	12%

Since the heart is forced to perform an increased amount of work in order to maintain an adequate peripheral blood flow, work hypertrophy occurs and

cardiac enlargement develops. This appears first in the region of the left ventricle and manifests itself as rounding and elevation of the apex. This cannot be detected early by physical examination and one must depend on x-ray studies. The electrocardiagram may show evidence of left ventricular preponderance, and in the late stages T-waves often occur, indicating relative coronary insufficiency.

Dilatation of the heart follows hypertrophy. The apex can then often be palpated or percussed beyond the mid-clavicular line.

Heart failure follows, as evidenced by dyspnea, orthopnea, cough, basal rales, and peripheral edema.

The anginal syndrome may develop because of relative decrease in blood supply to the muscle. This is usually associated with coronary sclerosis. The diagnosis can usually be made from the history, but occasionally special methods are required to differentiate this from other conditions producing chest pain.

Myocardial infarction may develop with prolonged chest pain, elevation of temperature, drop in blood pressure, and characteristic electrocardiographic changes.

Kidneys: Though renal insufficiency is a relatively uncommon cause of death in hypertension, early changes do occur in the kidneys and progress as time goes on. It has been shown that early in the course of hypertension the maximum tubular excretory capacity is diminished with an associated decrease in renal blood flow. The glomerular filtration remains normal at this stage, while the fraction of plasma which is filtered by the glomerulus is increased.[9] Though these changes occur in every hypertensive individual, indicating impairment of renal function, the laboratory procedures which can be done in the average clinical laboratory are normal.

The urine is not abnormal, the blood urea clearance intravenous P.S.P., and concentration tests are all normal. Later, small amounts of albumin, casts, and red blood cells appear in the urine and the clinical tests show some impairment of function.

Elevation of nonprotein nitrogen does not occur unless uremia supervenes or unless some extra renal factor precipitates it. When the malignant phase occurs, urinary abnormalities appear early and the renal function tests then may show a marked decrease in renal function.

HYPERTENSIVE TOXEMIA OF PREGNANCY

No discussion of hypertension would be nearly complete without at least mentioning this subject. The condition is superficially similar to other types of hypertension in that there is an increase in blood pressure without the presence of renal insufficiency. However, it differs in that albuminuria and edema are present and that the blood pressure usually returns to normal when the pregnancy is terminated.

This condition appears in six to nine per cent of previously normal patients, and 50% of previously hypertensive patients.[2b]

Four important points stand out:

1. Essential hypertension follows about 25% of hypertensive toxemias of pregnancy.[2b]
2. Resulting permanent hypertension depends somewhat on the time that the toxemia is allowed to exist.[13]
3. The condition is apt to recur with subsequent pregnancies,[14] and
4. Pre-existing hypertension is often accelerated by pregnancy.[14]

It seems good advice that the individual who has had hypertensive toxemia or who has hypertension should be cautioned against pregnancy and that, if pregnancy does occur, interruption should be carried out at the first sign of elevation of blood pressure.

GROUPING OF HYPERTENSION

This serves the useful purpose of allowing one to classify a particular patient and to predict his probable course.

The tables are taken from Herndon's *An Introduction to Essential Hypertension*. They are as follows:[14]

Early or Mild Benign:

Age—30 to 65.

Symptoms—None to slight. Health good.

Blood pressure—Systolic 150 to 200. Diastolic 100 to 120. Occasionally normal at rest.

Retinal changes—None or minimal arterial narrowing.

Heart—Slight or no demonstrable change.

Urine—Normal.

Renal function—Normal.

Brain—Normal.

Five-year mortality—30 per cent.

Moderate Benign:

Age—21 to 59.

Symptoms—Slight. Early morning headaches, vertigo. General health good.

Blood pressure—Systolic 200 to 270. Diastolic 100 to 130. Lower at rest but never normal.

Retinal changes—Definite arteriolar sclerosis. Arteriovenous compression. No retinitis.

Heart—Slight enlargement. Left ventricular preponderance. Good function.

Urine—Mild albuminuria and casts.

Renal function—Slightly decreased. Urea clearance 30 to 40 cc.

Brain—Normal.

Five-year mortality—46 per cent.

Late or Severe Benign:

Age—22 to 57.

Symptoms—Definite. Headache, nervousness, vertigo, tire, dyspnea, nocturia.

Blood pressure—High. Almost always over 170 systolic and 110 diastolic.

Retinal changes—As before, plus retinitis with edema, white spots, cotton-wool patches, and hemorrhages.

Heart—Enlarged. Definitely diminished reserve.

Urine—Albumin, casts and often red cells.

Renal function—Decreased. Urea clearance 20 to 30 cc.

Brain—Cerebral disturbances or accidents frequent.

Five-year mortality—80 per cent.

Malignant Syndrome:

Age—8 to 64.

Symptoms—Severe. Headaches, disturbed vision, muscle pains, weakness, dyspnea.

Blood pressure—High and fixed. Systolic usually over 250, diastolic seldom below 140.

Retinal changes—As in group 3 plus papilledema.

Heart—Enlarged. Actual or impending failure.

Urine—Albumin, casts and red cells.

Renal function—Function usually low with urea clearance 7 to 20 cc.

Brain—Disturbances present.

Five-year mortality—99 per cent.

CLINICAL EVALUATION

A plea is made for less frequent but more thorough examination of hypertensive patients. Blood pressure determination should be made after the patient has been resting ten to fifteen minutes. Several readings should be taken and recorded. In order to determine whether an individual has true hypertension or is potentially hypertensive, readings should be taken on several different occasions. Once the diagnosis is established, it is unwise to have the patient return frequently for blood pressure readings. His mind becomes focussed on his blood pressure, which is merely a symptom of his disease and often becomes unduly concerned or unduly reassured by this procedure.

Major fluctuations of blood pressure occur for no apparent reason and it is too easy to give credit to some particular regime or medication, which is in vogue, for a dramatic lowering of the blood pressure. Unless a patient is being observed for some particular reason, for example, blood thiocyanate determination, do not ask them to return frequently.

Fundoscopic examination is most valuable and should be carried out in a dark room with the pupils dilated. The retinae should be described and recorded so that future changes can be evaluated.

Cardiac Examination: Heart size may be roughly determined by physical examination. This is sufficient for practical purposes. Ideally, however, every hypertensive patient should have some sort of recorded measurement of heart size, either by teleoroentgenogram or orthodiagram. This serves as a base line for future comparison.

An electrocardiogram should be taken since this may confirm a clinical impression or may show up unsuspected myocardial damage. It is more valuable prognostically than therapeutically.

Heart failure can be best detected by history and physical examination. Occasionally special procedures such as venous pressure, circulation time, and vital capacity are necessary aids to confirm this.

When failure occurs, full digitalization should be carried out and a maintenance dose continued indefinitely. Sodium should be restricted in the diet to a minimum and diuretics administered as needed.

Anginal failure occurs frequently and can be usually diagnosed by history, but special studies may be necessary before conclusive evidence is obtained. We have found the Master Step Test most useful.[16] With this one observes the effect of a standard amount of exercise on the electrocardiogram. When the exercise produces relative myocardial ischemia,[17] characteristic electrocardiographic changes may occur, thus giving objective evidence of coronary insufficiency.

Renal Evaluation: Renal pathology is advanced before demonstrable abnormalities of function appear. Examination of the urine is an obvious method

of evaluation. The presence of albumin, red blood cells, and casts may indicate serious damage particularly if heart failure is not present. A high specific gravity, about 1.020, on a random specimen indicates that renal function is adequate, while a low one means nothing. If the specific gravity is low, a concentration test should be performed.

The intravenous phenolsulfonephthalein test is also a simple test that can be done in the office. The urine voided fifteen minutes after 1 cc. of the dye is injected should contain 25% or more of the injected dye.

Blood urea clearance is probably the best clinical method for determining kidney function. This requires the assistance of a good clinical laboratory and careful technique.

The non-protein nitrogen or blood urea-nitrogen becomes elevated when renal compensation fails, but not until the other tests show marked decrease in function, unless some extra renal cause for azotemia is associated.

Intravenous pyelogram should be performed on every early case of hypertension, particularly in young people in the hope that unilateral renal disease may be found and in rare instances the hypertension cured.

Urological consultation may be necessary in some instances for evaluation and treatment of specific renal disorders such as lithiasis and pyelonephritis.

MANAGEMENT

Specific treatment of hypertension should have as its aim the reversal of the fundamental abnormality, which is arteriolar constriction. Since there is no known method of treatment which will accomplish this, one must resort to palliative measures.

Rest: Vasomotor release occurs to some extent when physical and mental rest are instituted, and the blood pressure may be considerably lowered. It is, therefore, important for the hypertensive patient to obtain 10 to 12 hours in bed at night and a 1 to 2 hour nap during the day. It is sometimes helpful for an individual to remain in bed for 24 hours once or twice a month. Relaxation is often enhanced by the regular ration of a sedative. Long relaxing vacations are helpful.

Rest and relaxation are important, but complete retirement is usually harmful, and it is more desirable for an individual to lead a relatively sedentary productive life than to become an invalid.

Diet: There is no special diet that should be given to all hypertensives. If the individual is obese, his calories should be restricted, and if he is malnourished he should be given a good enough diet to bring his weight to just below his average normal. Limitation of proteins or of salt have no place in the management of uncomplicated hypertension.

Psychotherapy: This is probably the most important phase of the management of the hypertensive. It should be explained to him that he has a disease that he can live with for a number of years and that disaster is not apt to befall him tomorrow. Occasionally an emotional upset can be unravelled and the blood pressure considerably reduced.[18]

The average practitioner can employ a sympathetic ear and can offer solace to great advantage to his patients by considering him as a whole rather than a blood pressure reading.

Drugs: A. Sedatives have been mentioned. These should be given in moderation and should be varied so that the patient will not become unduly tolerant of any particular drug. It is wise to discontinue the medication for short periods of time.

B. Nitrites produce smooth muscle relaxation and temporarily reduce blood pressure but this effect is so transient that benefit is very doubtful.

C. Thiocyanate: Potassium and sodium thiocyanate have been given for a number of years for hypertension. The mode of action is unknown but it has been observed that blood pressure is often reduced when these are administered. It is important that the blood concentration be determined frequently because if the level becomes above 12 to 15 mg. per 100 cc., toxic manifestations may appear and occasional fatalities result. Severe reactions have also been observed with supposedly safe levels.[9]

The optimum level of 8 to 12 mg. per 100 cc. can usually be reached in a few days to a week by giving 12 gr. per day and can be maintained by giving 3 to 6 gr. per day. Weekly determinations of the concentration of the drug in the blood is important. This can be done by a simple office test which gives approximate result adequate for clinical purposes.

Renal Extracts: Enthusiasm ran high in 1939-40 when work then in progress indicated that the blood pressure of animals and of humans could be reduced by oral ingestion or parenteral injection of kidney extracts.[19] These effects have been found to be non-specific, however, and there is at present no hormonal treatment of the disease.[9] A great deal of work has been done and it is possible that future workers will develop some type of extract so that the hypertensive patient can be given an injection regularly which will keep his blood pressure within normal limits.

Surgical Treatment of Hypertension: Surgery has two aims in the treatment of hypertension:

A. Removal of a diseased kidney which is a causal or a contributing factor in the production of the blood pressure elevation.

B. Interruption of sympathetic pathways and allowing vasodilatation of a large vascular bed.

The former is done when it can be definitely shown that the kidney is damaged or that there is obstruction of the blood supply to one kidney. It is rare, however, first to find unilateral renal disease and, once found, it is rare that after removal of the kidney the blood pressure returns permanently to normal.[9]

Interruption of the sympathetic pathways is a palliative procedure which by no means gets at the cause of the disease since the increase in vasomotor tone is not the fundamental abnormality in essential hypertension. Denervation of a large area of the peripheral arteriolar bed causes pooling of blood in this bed and results in a decrease in venous return to the heart thus causing a reduction in cardiac output with subsequent decrease in arterial blood pressure.

Acceptable results have been obtained in selected individuals,[20] though at the present time no one can say whether or not permanent benefit will result or whether or not life expectancy is increased.

The selection of patients for sympathectomy is difficult. There are a group, however, who have little arteriolar damage, good renal function, no demonstrable heart disease, and whose blood pressure becomes markedly reduced during rest. These individuals are often greatly benefited. Since the operation carries a low mortality, it is worth considering. Though this is the only thing we have to offer to hypertensives now, one wonders if that is a sufficient reason for offering it. Time will tell. In the meanwhile, we should discuss this frankly with our patients, telling them that it is palliative and not curative, but probably helpful.

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LABORATORY AND DIAGNOSTIC METHODS OF INTEREST TO THE GENERAL PRACTITIONER*

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It will be understood that in speaking of the general practitioner, I am referring to that most necessary and important member of our brotherhood who assumes the responsibility of counseling, and advising the family group in matters pertaining to their health. In a broad sense, the family doctor is interested in all well-established laboratory or other diagnostic procedures that will aid him in determining the cause of a disease process, or guide him in its treatment. It is generally agreed that the well-qualified family doctor can properly care for 80 per cent or more of the illnesses that come under his observation. If he is familiar with accepted diagnostic methods available, he will be quick to realize his limitations, and to guide those patients who need more detailed examinations or special treatment in the selection of suitable specialists. It is obviously impossible for him to have detailed knowledge of all special procedures, but he should understand their possibilities and their limitations. How else is he to discharge his obligation to his patients?

Time does not suffice to even call the roll of the laboratory methods that may be employed in the diagnosis of disease, or in following response to treatment. It would be unprofitable to attempt to formulate a special list for the family doctor. His use of these aids to diagnosis and therapy will depend not only upon his training experience and alertness, but upon their availability and reliability. We might reasonably speak of laboratory procedure of special interest to the cardiologist or the urologist, since their fields are restricted, but in the course of time a busy family doctor will encounter problems in all the fields of medicine. His knowledge of laboratory aids must be broad even if it is general. In some instances, especially if isolated, he may develop certain laboratory facilities of his own, but for the most part he must rely on private, commercial, hospital or government laboratories. The discriminating use of such laboratories is necessary, if he is to avoid unnecessary waste of his patient's time and resources.

As previously stated, he should know the possibilities and limitations of special aids. Laboratory methods in general are not diagnostic. They should be employed to confirm or disprove well considered clinical impressions, or as a guide in the progress of treatment. The limitations of laboratory aids are many, and blind dependence on laboratory results unsupported by sound clinical judgment will often lead one astray.

There is the limitation of the inherent errors in almost all clinical laboratory tests, even if performed with the greatest care. The meticulous and detailed technique that must be exercised in carrying out and evaluating such a seemingly simple procedure as the determination of the number of red cells in a cubic millimeter of blood will illustrate this point. The pipette must be properly calibrated. A free flowing drop of blood must be obtained. Exactness in drawing blood to the desired mark, and in drawing up the diluting fluid must be observed. The suspension must be agitated until it is uniform. The fluid in the stem of the pipette must be expelled, and material for the count obtained from the content of the bowl. The counting chamber and cover glass must be scrupulously clean. Great care must be exercised in filling the chamber, so as to obtain a uniform distribution of cells. The technician must observe a definite method in accepting or rejecting cells on marginal lines, and must count the cells in enough squares to assure a fair average for the entire chamber. With all of these precautions, with the same technician using the same sources of blood, and making repeated counts under uniform conditions, there will be a variation of 200,000 to 300,000 cells. It is further known that hydration and dehydration, relation to meals, chilling, local congestion, excitement, nervousness and other factors, will further affect the results. All methods of precision adaptable to clinical use have an appreciable range of error.

The human element is a further limitation. Error here may be due to normal difference in judgment or opinion, to fatigue, or to carelessness, indiffer-

*Read as part of a Symposium on General Practice at the meeting of the Medical Society of Virginia at Virginia Beach, October 14-16, 1946.

ence, or lack of training. A good technician, in addition to training and experience, must have a medical conscience, and must be temperamentally fitted to do painstaking and detailed work. Many errors are often due to overload and fatigue. Failure to limit the load on a laboratory results in poor work produced under pressure, and detracts from the value of all laboratory work.

The third limitation is in interpretation, either by the clinician or the worker who undertakes to advise the clinician. The clinician must know not only the normal variation of values, but also the probable and possible range of abnormal values. Where one sees the color index changed over night, or a shift in the absolute ratio of granulocytes and lymphocytes beyond the range of probability, skepticism as to the accuracy of some of the reports is justified.

The limitation of availability is obvious. The facilities in a remote village are not comparable to those in a medical center. This limitation, however, should not be in quality, but in the variety, complexity and number of procedures. A few procedures accurately performed are of far greater value than a long list of mistakes. The family doctor practicing under the shadow of a medical center may have access to many more aids than his country brother, but he should not have the advantage of greater accuracy. The isolated physician working with simple equipment, but able to correlate his clinical and laboratory findings, may develop even greater accuracy. The development of large, well-equipped laboratories where the worker is remote from the patient, has not always led to improvement in the quality of laboratory work.

There is also the limitation of expense. Perhaps in the golden era, visualized by those who advocate socialized medicine, this may not be a consideration. Should this occur, it will be unfortunate. If laboratory services are free to everyone, they will be used without judgment or discrimination. This will not only tend to produce sloven clinical medicine, but will often react badly on the patient. Those of you who had experience in the armed forces know how often neuroses were aggravated or induced by prolonged hospitalization and aimless indulgence in multiple laboratory examinations.

The family doctor must be aware of all of these limitations, and on the basis of accuracy, simplicity and availability select those procedures that he can best use to supplement his clinical skill and judgment. Again, it is not possible to achieve completeness or to present to you an exhaustive list of such aids. I can only point the way by a few examples.

Confronted with a patient with a continued fever, an accurate leucocyte count and differential, will serve to place the case in one or two groups. With a normal or low count, one would consider the typhoid group, malaria, tuberculosis, undulant fever, atypical pneumonia, influenza, to mention a few. A careful differential and an examination of a stained smear will further narrow the field. If a leucocytosis is found, the possibility of pyogenic infection, either general or local, must be explored. Here, again, clinical judgment must be used, since overwhelming infections may depress the leucocyte response, or the bone marrow may be stimulated or depressed by some concomitant condition. In the presence of an anemia, the first effort should be to determine whether the anemia is due to blood loss, blood destruction, or failure of blood formation. Examination of the formed elements of the blood may give the answer, since an abnormally low white count, platelet and reticulocyte counts point to general depression of bone marrow activity. The presence of an associated leucocytosis for which there is no obvious cause, will suggest acute blood loss. Observation of the morphology and staining characteristics of the red cells may point to a hemolytic anemia.

The availability in state, municipal and many hospitals and private laboratories of agglutination tests for the typhoid and typhus groups, together with undulant fever and tularemia makes possible the laboratory confirmation of the presence of these diseases. Both positive and negative findings must be received with due regard for the fact that agglutinations may be slow in developing, or may be non-specific for the disease being studied in patients who have been vaccinated.

Serological tests for syphilis are probably more widely available than any other test. Even when performed by qualified technicians in an accredited laboratory, they are not to be accepted on faith unless the exact technique used in a particular laboratory is known. Both false negative and false positive reactions occur. Serological tests for syphilis may be either highly sensitive, giving few false negatives, or highly specific, giving few false positives. They cannot be both. Transitory positive reactions

occur in the course of many diseases, and biological false positives occur not infrequently. It would seem that the state laboratories should work with a highly specific antigen and reduce the risk of reporting false positives, since the state is concerned primarily with the public health aspect of the disease.

Bacteriological examination of the blood and other body fluids has become increasingly important, with the advent of specific chemotherapy. The decision on whether to use penicillin, sulfadiazine, or streptomycin, or none of these, will often depend upon bacteriological findings. Accurate work in this field, however, requires well trained workers, and good facilities. These facilities cannot ordinarily be developed by the family doctor. He must have recourse to large hospital or government laboratories. If he is familiar with methods of obtaining and handling material for culture, he need not be denied this aid.

Biochemical methods can also be made available. A knowledge of the level of non-protein nitrogen, urea, uric acid, sugar, calcium, sodium, phosphorus, cholesterol and other substances in the blood is an important aid in the diagnosis of disease as a guide to therapy. The fluctuations of total plasma protein and its components, principally albumin and globulin, play an important part in nutritional disease, burns, the post-operative course of patients, and in renal and liver disease.

Functional studies of certain organs, particularly the liver and kidney, are necessary adjuncts in the diagnosis and treatment of diseases of these organs. Urine concentration tests, dye excretion, urea-nonprotein nitrogen ratio and urea clearance determination give important information as to kidney function and changes in these findings point to the progress of recession of disease.

In the evaluation of liver disease, the determination of the presence or absence of dye retention, the fluctuation of the level of serum bilirubin, cholesterol and cholesterol esters, cephalin fluctuations, the total protein, albumin and globulin levels are of significance. Such lists of laboratory aids could be extended almost indefinitely. More important than a multiplicity of tests is the selection of those upon whose accuracy one can depend.

It is evident that the family doctor must have an interest and a certain familiarity with a large number of diagnostic tests and procedures. This interest must extend to a knowledge of the possibilities and limitations of these special procedures. He should be capable of interpreting them in connection with the clinical findings in his patient. He should be equally aware of the advantages and shortcomings of laboratory aids and should use them as aids only in the diagnosis and treatment of disease.

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DISCUSSION OF PAPERS BY DRS. JONES, CARSON, BLALOCK, BECKWITH AND MARTIN

DR. J. L. RAWLS, Norfolk, President: I should like to start the discussion by asking Dr. Jones a question. He made two statements in sequence in which I was interested. He said that one of the things that create disturbances in the family life is the fact that the mother frequently goes out to work and the child develops some kind of complex because it does not have the normal association with its mother and feels neglected. The next statement, coming immediately after it, was the statement that frequently the mother brings home a new baby and that further upsets the little fellow's equilibrium. I wonder if there is any connection between the two statements?

We are ready now for general discussion of these papers.

DR. JOHN F. WILLIAMS, Richmond: I should like to make a brief comment on Dr. Jones' paper. He said, in few brief days, little in time and great in significance, in which the baby associates with his mother right after birth, at a time when the baby should be getting breast milk, should be breast-fed and should be held by the mother, there is a feeling of security developed and basic hungers are satisfied; the child is satisfied by warmth and love and affection, and so on. It has been shown by Dunbar and others that in this brief period certain foundations for illness in later life can be laid down. Rejection by the mother can be the foundation for such illness. It is with those, of course, that I have to work; and I think that Dr. Jones may prevent many from requiring psychosomatic care later in life.

DR. BASIL B. JONES, Richmond, closing the discussion on his part: I appreciate very much the discussion my paper has received.

In reply to the question about the working mother and the mother returning from the hospital with a new baby, and the effect they might have on the older child, the child's view of the world is rather narrow and is closely related to himself. When the mother has to go off to work, the child may interpret her leaving as a personal rejection. He becomes emotionally upset and often becomes ill. I think Social Agencies often find that in moving a child from one foster home to another, the child becomes sick—he may have a cold or a digestive upset for example, or if previously trained away from bed-wetting he may start it all over again. I think very definitely that emotional disturbances in childhood may lead to physical illness.

As to the new baby, the older child has been the center of attention for two or three years. The mother then goes off to the hospital and comes back with a new baby who commands the attention that previously was his. Naturally the older child feels this keenly and becomes jealous of the baby. His natural curiosity and interest in the new baby often meet with rebuff. He is hurt and bewildered because his mother does not devote her attention to him as she did before the baby arrived. He may try to attract attention by putting on "monkey shines", or he may resort to infantile habits in an endeavor to compete with the newcomer. If he becomes ill, he is more likely to succeed. I was called in recently to see a child who, the mother told me, had never been ill before. The mother had recently come home with a new baby, and after a few days the older child came down with an acute illness, an ear infection which seemed more difficult than usual to clear up. In regard to alleviating these situations the doctor can help a lot. Of course, mothers are going to come home with new babies, and some mothers are going to have to work; but when these situations arise the doctor should be able to show the parents the dangers that exist and should help them devise some way to minimize them. He should tell them that the older child who has been on the scene longer and has been the center of love and affection will feel keenly being relegated to the sidelines. He should advise them, too, that while certainly the small baby should get love and affection in abundance, the older child should get his share too, and should not be pushed away, chided or slapped because the parent is irritated by his behavior. Improper handling may leave a mark on the child which might affect his future behavior adversely, and, in addition, any acute illness resulting from the emotional trauma might be severe and damaging physically and might establish an undesirable reaction pattern.

Floral Eponym (51)

LINNAEA

KARL VON LINNÈ (LINNAEUS), 1707-1778

The Twinflower was Linnaeus' favorite flower and was appropriately named for him as he discovered it in Lapland where he was sent by the Royal Society on his first scientific expedition. The one or two species are woody, trailing evergreen plants of the honeysuckle family. They grow in the cooler parts of the north temperate zone extending north to Alaska and northern Siberia. The twin flower requires partial shade, good drainage and an acid soil. The *L. americana* differs from *L. borealis* only in the leaf margins, which are hairy-fringed only near the base. The L. americana is commonly called "deer vine" and "twin sisters."

Linnaeus' fame as a scientist is well known. That he was a physician, and a good one, is not so well known. His great love, of course, was botany which he made into a science. He practiced medicine, but only to make money: Once at Falun so as to be able to go abroad to get his degree, and once at Stockholm, to enable him to marry. At the latter place he was so successful that he was called to practice at the palace. He was opposed to bleeding and was the father of simple prescribing. A delightful account of his life is to be found in the *Canadian Medical Association Journal* for April (56:440, 1947).

CANCER OF THE COLON AND RECTUM EMPHASIZING ASEPTIC PRIMARY ANASTOMOSIS FOR LESIONS OF THE COLON*

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A timely view on the treatment of cancer was expressed in (c.) 1350 by Chauliac, so-called father of surgery in France. He "believed in cutting out cancer with a knife at an early stage." No one in 600 years has questioned that sound opinion. *What* to do, and *when* are plain. The question *how best* to accomplish the imperative "cutting out" procedure has remained defiant through the history of cancer surgery. Particularly, the surgical technique of carcinoma of the colon and rectum has resisted standardization. It has changed now and then, but with little noticeable "development," although the formidable problem of the successful resection of these sinister lesions has occupied the best and most courageous minds in our annals. Even today, in the light of modern scientific knowledge, experience, and equipment, the "operation of choice" is still debated.

Our presentation deals with the surgical treatment of cancer of the colon and rectum as done by Drs. F. S. Johns, D. S. Daniel, and W. A. Johns from 1938 to 1946. We shall present our series of 110 cases in some detail, with emphasis on the advantages of the aseptic immediate anastomosis technique. We were all three trained in the modified Bloch-Paul-Mikulicz procedure, and feel qualified to discuss its disadvantages as well as our preference for immediate anastomosis.

In 1913 when one of us (F.S.J.) began his surgical training, the Mikulicz delayed anastomosis was the most popular operation for cancer of the colon. It has remained in general favor ever since, and no great improvement in its results can be noted through the past thirty years. In the same period general surgery has advanced rapidly in many fields, particularly those of the brain, chest, lungs and vascular system. Surgery of the colon, from a technical viewpoint has changed little for the better. This is a broad statement, but is validated by a comparison of our actual progress in this field with advances made in many other departments.

In 1916, C. H. Mayo reported a series of cases done by the Bloch-Paul-Mikulicz procedure. He had an operability then of 71.8 per cent and a mortality of 15.5. In 1945, the Lahey Clinic reported 77 resections of the right colon, 62 of which were done by the two-stage modified Mikulicz procedure. For the remaining 13 cases the one-stage primary resection with immediate anastomosis was carried out. There were no deaths following the one-stage operation. But the Lahey Clinic still reports that the modified Mikulicz is used on all their cases of cancer of the left-half and transverse colon, of the splenic flexure, descending colon and upper sigmoid. In spite of the vast literature on this subject in current journals, it appears that the Mikulicz operation with modifications, as originated in the last decade of the past century, is still generally popular and practiced by the large majority of those doing colon surgery.

Change is not progress. But after 50 years we take issue with Paul-of-Aegina, 7th Century medical sage, who wrote: "The ancients have said all that can be said on the subject." In 1938 one of us (W.A.J.) returned from a thorough schooling in the one-stage aseptic anastomosis technique, utilizing the newly devised Stone clamp. Since 1940 we have consistently done the one-stage primary aseptic anastomosis for cancer of the colon, and have found the Stone clamp an invaluable tool. For its smaller size, lightness, and adaptability the Stone clamp is for us an improvement over all former instruments for its purpose. Stone's own series to date includes about 200 cases operated on by this method.

No essay on intestinal anastomosis can omit a tribute to the Frenchman, Jean Francois Reybard (1795-1863). An experimental surgeon and anatomist, Reybard carried out the first successful resec-

*Read at the meeting of the Medical Society of Virginia at Virginia Beach, October 14-16, 1946.

Discussion of this and Dr. A. Stephens Graham's paper appears after Dr. Graham's paper.

tion with immediate anastomosis for cancer of the colon. This he did on May 2, 1833 (note *not '23,* see ref.) The patient recovered and lived for one year after operation. Reybard's case was not reported before the Academy of Medicine of France until July 30, 1843. His original article was entitled "Report of a malignant tumor of the colon; resection of the tumor and of the intestine; direct and immediate anastomosis of the two ends of that organ. Recovery."

Immediate anastomosis was perhaps already a subject of controversy, but according to his biographer, Reybard's contribution served as "the point of departure" from which modern colon surgery evolves. His work "opened the way" to the great Vienna surgeon, Billroth, *et al.*; to the Londoner, John Marshall; to Czerny, the Bohemian; and to von Volkman. The last named pioneer, as Professor of Surgery at Halle, Germany, in 1878, was the first to excise the rectum for cancer. Von Volkman's classic procedure, as later carried out and perfected by Miles, remains the standard operation for cancer of the rectum and recto-sigmoid.

A native of Poland, Johann van Mikulicz-Radecki (1850-1905) was Billroth's most famous pupil. The delayed-anastomosis procedure named for him was a departure in principle and technique from that of his preceptors. It is interesting today to observe a cycle in the history of colon surgery, as regards immediate anastomosis: from Reybard to Billroth to Bloch, Paul and Mikulicz to Stone.

Prominent among current contributors in the literature of this subject besides Stone are the familiar names: Parker, Kerr, Rankin, Lahey, Coller, and Wangensten. In Virginia our discussion on surgery of colon and rectum is comparatively scant. We find that only one published article on cancer of the colon with a case report has been read before the Medical Society of Virginia; this was read by Dr. J. S. Horsley in October, 1935. Two published articles on carcinoma of the recto-sigmoid with reported cases have been read before this Association. In 1930 Dr. S. H. Graves reported a series of 12 cases, 5 of which were operated on. In 1936 Dr. A. Stephens Graham reported 32 consecutive cases of cancer of the recto-sigmoid and rectum, of which 21 were operated on.

Eleven other articles and abstracts on these subjects have appeared in the VIRGINIA MEDICAL MONTHLY since that of Dr. Charles G. Cannaday (Vol. 11, 1897) which describes the first successful immediate intestinal anastomosis we find recorded in Virginia. Dr. Cannaday used the Murphy button for his procedure. The others include: (1) a case of carcinoma of rectum and recto-sigmoid operated on by Dr. George Ben Johnston on July 12, 1899, as listed by Dr. Charles R. Robins in "A Report of 125 Consecutive Abdominal Operations" published April 12, 1901. (2) A "Cancer Case" reported by Dr. Stuart McGuire, treated with temporary success by delayed anastomosis in May, 1902. (3) A "Case of Carcinoma of the Cecum with Recovery," operated on by Dr. Paul Howle, published February, 1919. (4) A "Survey of the Literature of Cancer of the Rectum" by Dr. William L. Sibley in 1939. Other articles on the colon in our journal include: (5) an abstract of Hirschman's statement before the American Proctological Society in 1914: "In malignant growths of the sigmoid colon, excision with immediate anastomosis is the ideal indication." (6) "Some Features of Cancer of the Colon and Rectum" published January, 1928, by Dr. Horsley, recommending Kerr's technique and the one-stage anastomosis. (7) "The Diagnosis of the Large Bowel," in 1931 by Dr. E. H. Lehman, referring to "17 unselected cases" at the University of Virginia Hospital, 10 of which were colon cases, 7 were rectum. (8) A second article by Horsley on Cancer of the Colon and Rectum, without case reports, in 1932. (9) "Carcinoma of Colon in Childhood" in 1937 by Dr. H. J. Warthen, reporting a case with a survey of the literature on this subject.

The etiology of carcinoma of the large bowel is still undetermined. In fact, we know as little about it as we know about the cause of cancer anywhere. We are less certain than Professor Nussbaum who wrote in 1875 that "as causes of cancer may be cited old age, chagrin and great mental anxiety." We are perhaps a little closer to a long-sought truth than was our colleague who published an article on "lacing" as the reason for cancer of the uterus.

The most popular and likely cause of these lesions, as advanced to date, is the association of polyps with carcinoma of the colon. What per cent of carcinomas develop on polyps is not definitely determined; but it is certain that polyps undergo malignant degeneration. The percentage of benign polyps which become malignant is also unknown. It has been stated that carcinoma occurs eight times as often in the sigmoid and rectum as elsewhere in the

colon. Polyps seem to follow about the same distribution, and this arouses interesting speculation. It appears also to substantiate the opinion that 40 to 50 per cent of polyps become malignant.

Whatever the cause, cancer of the colon and rectum is a hostile and treacherous foe. In 1945, 2,637 deaths from cancer were reported to the Virginia Bureau of Vital Statistics. Of this number, 476 or 17.6 per cent were recorded as cancer of the intestines and rectum.

The early symptoms of malignant lesions of the large intestine are the symptoms in which we are primarily interested. The classic text-book symptoms are late in appearing. During its passage through the colon, the character of the contents of the bowel changes from a liquid or semi-solid consistency on its entrance into the right side to that of a firm, formed stool in the left side. It is natural that any lesion encroaching on the lumen of the colon should produce different symptoms at different sites during this transition.

Two early symptoms are definite indications of carcinoma of the colon or rectum. These are: (1) any change in bowel habits, and (2) blood in the stool. A change in bowel habits should be defined as anything from a slight irritating sensation to an inability to get the bowels to move. There may be an increase in gas and a feeling of inability to empty the bowels completely. As the lumen of the bowel becomes obliterated, constipation follows. The colicky pain of early obstruction is frequently seen in colon lesions; a dull aching pain over the lower back may be associated with lesions of the rectum. Bleeding or blood in the stool is caused by ulceration; carcinoma of the colon and rectum ulcerate early, thereby producing this early symptom which all physicians should regard as a danger signal. In carcinoma of colon and rectum the ulceration does not heal, and this symptom is usually present in lesions of the left side, especially in lower lesions. In lesions elsewhere, the bleeding usually makes its appearance as occult blood, so it is essential to examine the stools carefully for its presence. A marked anemia is frequently present in carcinoma of the right colon.

All of our cases of carcinoma of the rectum gave a history of some change in bowel habits, and 84 per cent had a history of the presence of blood in the stool. Eighty-eight per cent of our cases of carcinoma of the left colon gave a history of some obstructive symptoms such as pain, cramps, nausea, distension, constipation, or inability to get the bowels to move. The predominant symptoms of lesions of the right colon were diarrhea, bloody stools, pain in the r. l. q., the presence of a mass, soreness on right side, weakness, and anemia.

A careful physical examination is most important, and we cannot over-emphasize the value of a digital rectal examination and a proctoscopic and sigmoidoscopic examination in all suspected cases of such malignancy. In a large percentage of cases of carcinoma of the large intestine, the lesion occurs in the region where it can be felt or seen by these simple examinations. Frequently, in lesions of the right colon a mass can be felt by abdominal palpation.

X-ray of the colon may be most helpful, but it is not fool-proof in diagnostic value. A negative X-ray is not conclusive evidence that no lesion exists. Dr. Dan F. Jones stated that roentgenology as an aid to diagnosis is accurate in 65 per cent to 85 per cent only of malignant lesions of the colon, and is accurate in an even lower percentage of lesions of the rectum.

Meticulous pre-operative preparation is essential. Every patient must be properly prepared from a general physical standpoint. If anemia exists, transfusions should be given until a normal blood picture is maintained. Both blood picture and chemistry should be normal; any abnormality thereof can usually be corrected by proper pre-operative dietary measures. When obstruction is present, intravenous methods are used. Radical operative procedures should be delayed until the patient's general physical condition has reached its maximum. The operation for cancer of the colon or rectum is a major procedure, but it is not an emergency operation.

Good surgery in this field, i.e., a low mortality rate and good end-results, depend on the proper pre-operative preparation of the bowel. If obstruction to any degree exists, it is imperative that the bowel be decompressed. No general rule can be laid down on how to accomplish this objective. Each case must be treated on its merits. For a partial obstruction of no great degree a liquid diet, mild cathartics and enemas may accomplish the wanted result. In cases of more complete obstruction, decompression must be obtained either by use of the Miller-Abbott tube or by a temporary ileostomy, cecostomy or colostomy above the lesion. In lesions

of the left side, when necessary, a temporary transverse colostomy is preferred. In lesions of the right side decompression can usually be obtained through proper use of the Miller-Abbott tube. In our cases the use of this tube has prevented the necessity of performing many a temporary colostomy; in our series of 47 colon cases we found it necessary to perform 5 cecostomies and two colostomies as a decompression measure. We have avoided ileostomies in conjunction with the operation, since reports show that this procedure increases mortality and is both unnecessary and unwise. However, radical surgical procedures cannot be carried out in the presence of a distended or edematous bowel. We believe the "leakage" sometimes reported as following intestinal anastomosis may be due to such an attempt to suture a distended or edematous bowel.

Before operation the bowel should have been thoroughly cleaned. Our patients are placed on a low residue diet on admission; mineral oil and a mild saline cathartic and enemas are given daily. To eliminate all non-digestive residue the diet is changed to liquids about three days before operation. A thorough cleansing enema is given the morning of operation. The use of sulfa drugs by mouth to decrease the bacterial flora of the intestinal tract may be helpful. At present we are using sulfasuxidine. In our series of 39 primary aseptic end-to-end anastomoses, 20 received some sulfonamide pre-operatively, and 19 received none. In our 43 rectal cases, 32 received some sulfonamide, and 11 received none. We do not advocate the local intra- or extra-peritoneal use of sulfonamides. The bladder should be emptied by catheter just prior to operation.

General anesthesia by an experienced M. D.-anesthetist is our choice and custom. Intravenous fluids are started when the patient reaches the operating table and blood is substituted as needed. Shock is much easier to prevent than to treat. Almost 100 per cent of our cases receive blood during the course of operation.

By making full use of the improved Stone clamps we find no excuse for contamination in surgery of the colon. After the clamps are applied the gut is excised with an electric knife and the borders are thoroughly coagulated. This renders the field of operation entirely aseptic. After putting in the sutures (as shown in the slides) and removing the clamps, we have never had "a leak". Nor do we feel that our technique is superior to that of other qualified operators doing colon surgery. Success is largely due to the preparation given each patient and to the instruments now available.

For our cases of resection of the recto-sigmoid and rectum the Miles operation has been most successful in our hands. It provides opportunity to carry out a complete dissection in the pelvis, and at the same time it can be done in one stage. In recent discussions on this subject we mark a growing tendency to preserve the sphincter muscle. We have made no attempt to follow this lead. If a high operability is to be maintained in cases of carcinoma of the rectum and recto-sigmoid, the operation must be radical with a complete excision of all glands. We believe that if consideration is given to sparing the sphincter, the operator will have this idea constantly before him and a less radical resection may be performed. A higher percentage of recurrences will result. Therefore, we do not at present subscribe to this procedure, however tempting. In several of our cases, both of colon and rectum, we have excised the local growth in spite of the presence of a limited liver metastasis. We feel that life is both prolonged and made more comfortable by this radical procedure.

Post-operative treatment varies according to the type of operation performed. Following primary aseptic anastomosis, patients are allowed nothing by mouth for the first 48 hours, then only water for 24 hours, then clear liquids. Their diet gradually increases until by the sixth post-operative day they are usually on a soft diet. Fluid and protein balance are maintained by the intravenous route. Blood transfusions are given as indicated. If any distension occurs, a Miller-Abbott tube is passed. Enemas are avoided as being definitely contra-indicated. On about the fourth or fifth post-operative day, these patients are started on mineral oil, oz. 1, twice daily. The generally accepted rules of post-operative care are also adhered to.

Following the one-stage abdominal perineal procedure, post-operative care is similar to that for colon resections, except for the local care of the colostomy and of the perineal wound. The colostomy is usually opened after 24 hours and is irrigated on the third day. Aluminum paste is used locally around the colostomy to protect the skin and wound. We rarely encounter any infection in these wounds, and we always place the colostomy in the mid-line

through the incision. The packing used inside the perineal wound is partially removed on the third day, with subsequent partial removal daily, until it is completely removed by the fifth or sixth day after operation. This wound is irrigated daily until healing occurs.

It is unfortunate that some sentiment exists against colostomies. This is not entirely confined to the laity. The physician often expresses himself too freely on this question to his patient's detriment. Surely a colostomy is not an ideal arrangement. It is a regrettable compromise; but a compromise which is compatible with a useful life, and actually few patients complain about it. Our patients must be led to realize that a colostomy is a life-saving device and absolutely necessary.

The most frequent complication in this type of surgery is the inability of the male patient to void after abdominal perineal resection of the rectum. Many of these cases are in the age group in which some hypertrophy of the prostate exists. An indwelling catheter is always inserted just prior to operation. We have tried in some cases leaving this catheter so placed for several days, and in others have removed it immediately after the operative procedure and catheterized the patient as indicated. Some are able to void, but a high percentage have difficulty. We feel that getting these patients out of bed early is helpful in treating this complication, as well as in preventing others, but a wholly satisfactory solution for it has not been found.

Urinary infection is another post-operative complication occasionally seen. We treat these infections with the various chemo-therapeutic agents available to date.

Recent reports from several outstanding clinics furnish interesting statistical comparisons with our own series. Mayo and Lovelace on malignant lesions of the cecum and ascending colon state: "In the 590 cases in which operations were carried out with view of cure there were 315 in which a one-stage resection was performed, 246 in which a two-stage was utilized . . . 29 in which more than two stages were employed." Hospital mortality in this report was: for one-stage 22.2%; for two-stage, 28.9%. Two-stage mortality included 15% after first operation, 13.9% after second operation. There were 10 deaths in the third group of 29 cases. As to survival, the one-stage operation showed a higher rate than the two-stage, even disregarding the high mortality rate of the latter procedure. Hospital stay for these one-stage patients averaged 21 days; for two-stagers, 45 days.

In December, 1945, Waugh and Custis reported 50 cases operated on at one-stage, with 2 deaths, a 4% mortality. Coller and Ransom had 8.9% operative deaths. Coller and Vaughan reporting in 1944 state: "For many years we employed the exteriorization operation in our clinic. First Mikulicz, and then the Rankin obstruction resection with far better results. We report 68 patients done by one-stage procedure . . . This aseptic method has become increasingly popular with our surgeons."

Since 1938 we have seen 110 cases of carcinoma of colon and rectum with a total operability of 81.8% and an operative mortality of 4.4%. Of this number, 104 cases were admitted to the Johnston-Willis Hospital. Of 63 cases of carcinoma of the colon, 47 were operable, 16 inoperable, an operable rate of 74.6%. A primary end-to-end aseptic anastomosis was done in 39 of these cases without a single death. A Mikulicz type of exteriorization was carried out in 7 cases with 2 deaths. Causes of death in these two cases were (1) a pulmonary embolus, (2) septicemia. We have not used the Mikulicz operation since 1940. One patient in this group, aged 83, refused operation. The records of six cases were incomplete and are not included in our following statistical study. The follow-up of our series will be reported later.

Some type of operative procedure was carried out in 12 of the 16 inoperable cases. Two of these presented a perforation of the sigmoid at the site of the lesion and died of generalized peritonitis. In 6 inoperable cases a pre-colostomy was done. Thirteen of the sixteen inoperable patients had lesions of the left side of the colon; 3 had lesions of the right side.

Forty-seven cases of carcinoma of the rectum were seen. Three of this group were inoperable; one refused surgery. Thus, more than 90% were found operable in this group. Of these 43 operable cases, 33 had the one-stage abdominal-perineal Miles resection of the rectum. Nine had posterior resections (Kraske). One patient, aged 83, had a local cauterization of his lesion. The cases that had posterior resections were bad surgical risks, with one exception. This man had a very low lesion. He is living and well after five years. Of the 3 inoperable cases one had a cecostomy; one, a local

cauterization; and on the third no surgical procedure was attempted. There were two operative deaths in this series. Both occurred following abdominal-perineal resection of the rectum. As proved by autopsy the cause of death in one case was generalized peritonitis following disruption of wound. This patient had metastasis of the liver. In the second fatal case death followed a massive pulmonary embolism.

LESION:	No. CASES	PERCENTAGE
Cancer of rectum	47	46.1
of recto-sigmoid	11	10.5
of sigmoid	18	17.3
of descending colon	3	2.7
of splenic flexure	5	4.7
of transverse colon	5	4.7
of hepatic flexure	4	3.7
of ascending colon	7	6.6
of cecum	4	3.7

Carcinoma of colon ——— Male: 21 Female: 36

Carcinoma of rectum ——— Male: 24 Female: 23

Average age carcinoma of colon—58 years.

The youngest patient was 34.

The oldest patient was 84.

Average age carcinoma of rectum—60 years.

Youngest, 38 years.

Oldest, 84 years.

SUMMARY:

We report a series of 110 cases of cancer of the colon and rectum seen in the past eight years. Total operability, 81.8%; total mortality, 4.4%. In our 63 colon cases, operability was 74.6%. Mortality, following aseptic immediate anastomosis using the Stone clamp on 39 of these cases: 0. Seven Mikulicz-type operations were done prior to 1940 with two deaths. Of our 47 cases of cancer of the rectum 33 had the standard Miles operation; operability, over 90%, mortality, 6%.

Certain advantages stand out in the summary of our cases of cancer of the colon done by the one-stage aseptic anastomosis technique. The radical resection is more completely done. The patient's stay in the hospital is cut in half; this is obviously of great economic advantage to the individual, and is a saving of bed-space to the hospital. The mental state of these patients is also signally improved by the one-stage operation. No Mikulicz patient is happy with his double-barreled open colostomy, no matter how well it is functioning, or how thorough the explanation of it has been beforehand. Most important of all these advantages, as reported in the literature, the mortality of colon surgery is reduced by the one-stage, aseptic anastomosis operation. In our series of 39 cases there was no mortality.

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CURRENT TRENDS IN SURGERY OF THE COLON AND RECTUM FOR CANCER*

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Richmond, Virginia.

A review of the surgical literature of the past five years discloses a decided trend toward elimination of colostomy, either temporary or permanent, in the treatment of cancer of the colon, rectosigmoid, and rectum. Since this represents a revival of procedures long ago discarded by a majority of surgeons, it would seem appropriate at this time to study the available evidence and adopt a sound attitude regarding the problem.

This revival of operations designed to eliminate abdominal anus and to preserve the rectal sphincter marks the completion of a hundred year cycle of surgery of the large bowel for cancer and the commencement of another era with methods almost identical to those which were employed during the first half of this cycle. The earliest operations on the colon consisted of primary anastomosis after resection. The mortality from peritonitis, however, was so disastrous that resection of the colon fell into disrepute until Mikulicz in 1902 popularized the multiple stage operation first performed by Block in 1892. Rankin subsequently developed the method into a radical measure of wide adaptability, high rates of five-year survivals, and relatively low immediate mortalities. Resection of the rectum for cancer underwent an even more spectacular process of evolution, from the simple amputation of the lower rectum introduced in 1826 by Lisfranc, through the progressively more elaborate procedures of Verneuill (1873), Kraske (1885), and Hochenegg (1888), all of which were directed toward establishment of perineal anus, with or without preservation of sphincteric mechanism, and, finally, the epoch-making radical, combined abdominoperineal resection introduced by Miles in 1908 and which, in the opinion of most surgeons, still remains the most satisfactory operation so far devised. By almost universal agreement it permits in experienced hands the lowest mortalities, the highest operability rates, and the greatest percentage of cures. The sole objection which has been raised in regard to this operation is that permanent colostomy is one of its essential features. For this reason, alone, within the past several years, a few surgeons, notably Babcock, Bacon, Wangensteen, Dixon, and Waugh, have resorted to modifications of the operations of the pre-Miles abdominoperineal era.

The obligation of the surgeon in the treatment of carcinoma of the large intestine is to accomplish as radical an operation as the individual patient can stand. This invisions not only a wide excision of the segment which harbors the growth, but the extensive removal of the contiguous gland bearing tissue as well. Esthetic considerations, such as avoidance of colostomy, are secondary to this main purpose. It is, therefore, essential that we have proof that the revised technics, especially those devised for anterior resection of the rectosigmoid and rectal ampulla, with immediate restoration of continuity, offer the maximum chance for cure. This has not as yet been determined, and, as was the case with the abdominoperineal operation, it will take a considerable time in which to do so.

Primary Anastomosis of the Colon. Most surgeons, it is believed, are now in agreement that in properly selected cases primary suture of the colon is the operation of choice. Nevertheless, exteriorization procedures, such as the Rankin obstructive resection in which temporary colostomy is required, will continue to be indicated under certain circumstances as in excessively fat people with short, heavy mesenteries and in cases in which decompression has been unsatisfactory as indicated by thick, dilated bowel proximal to the obstructing lesion. The principal danger in the current trend toward primary anastomosis of the colon is that, perhaps, the pendulum has swung too far in the opposite direction; many instances of improper selection of cases have been recently noted. Adjuncts, such as the Miller-Abbott tube and intestinal antiseptics, although of considerable value, do not, however, overcome all of the handicaps mentioned above and which usually preclude employment of the ideal, single stage maneuver.

Various factors have been ascribed by different surgeons as being responsible for lowering the mortality rate in primary anastomosis of the colon.

*Read at the meeting of the Medical Society of Virginia at Virginia Beach, October 14-16, 1946.

There exists a considerable difference of opinion as to which of these are most important. Wangansteen and Waugh make an issue of the importance of a "closed", so-called aseptic method of anastomosis; Karl Meyer and others make an issue of employing the "open" method. Whipple has been the principal advocate of employing the Miller-Abbott tube to decompress the colon proximal to the suture line, whereas Wangensteen contends that a competent ileocecal valve usually prevents the removal of accumulated fluids and gas by siphonage. A marked reduction in the mortality rate is claimed by those who routinely establish complementary proximal drainage by such means as appendicostomy, cecostomy or colostomy. Other surgeons, notably Campbell, Wangensteen, Waugh, and Meyers, do not consider that proximal decompression routinely is necessary. This difference of opinion also extends to the employment of sulfonamides. A majority favor the administration of succinylsulphathiazole or sulfathalodine as an intestinal antiseptic, and the installation of sulfa crystals into the abdomen is favored by many. A few, however, including Wangensteen, make no use of the sulfonamides in any form.

Primary Anastomosis of the Rectosigmoid and Rectal Ampulla. Considerable impetus has been given to the revival of operations designed to preserve the rectal sphincters in instances of carcinomas of the rectosigmoid and rectal ampulla by the publications of Gilchrist and David (1938) and Coller (1940). Their pathologic studies of lymph nodes in specimens excised in the abdominoperineal operation for rectal carcinoma revealed little evidence of retrograde or lateral lymphatic spread in curable lesions. There is, however, a difference of opinion even among the principal advocates of sphincter preserving measures as to the proper interpretation of these findings. Bacon states that it may be assumed that the inferior zone of spread is relatively unimportant, and that, therefore, the sphincter musculature may be preserved, provided the lower border of the growth is 3 centimeters or more above the ano-rectal line. Wangensteen, on the other hand, states that despite the failure of Coller and his associates to find microscopic evidence of lateral lymphatic spread in lesions lying more than 3 centimeters above the ano-rectal line, he is convinced from personal experience that an operation which does not excise the sphincter muscles in juxtaposition to the bowel invites local recurrence and is, therefore, contraindicated. He cites instances of recurrence in five of his cases in which ampullary resection was accomplished, and although the procedure was palliative in four cases, he comments: "Yet, even in these patients abdominoperineal operation would have given better assurance against local recurrence." Even though he is an enthusiastic advocate of segmental resection and anastomosis in suitable small low-lying lesions and in most lesions of the upper rectum, Wangensteen, nevertheless, admits that these operations compromise somewhat on the extent of excision of the rectal wall distal to the lesion and that "from the standpoint of cure of rectal cancer, obviously the abdominoperineal operation is the best procedure."

It would appear that the crux of the situation in the current operative trend for cancer of the rectum is decided aversion to colostomy on the part of certain surgeons. The special consideration which compels interest in such procedures, states Wangensteen, is preservation of sphincteric function. Moreover, such an operation, he finds, appeals at once to the patient to whom the thought of a colostomy is ordinarily abhorrent and frequently revolting. He, nevertheless, adds this frank statement: "An operation which must be defended on the thesis that it may be a satisfactory substitute for patients who are more interested in preservation of function than in cure, is obviously not a good operation for cancer." Many of us will concur heartily in this opinion.

Bacon is even more strenuously opposed to colostomy. He wonders how many patients have died needlessly by refusing colostomy where radical surgery by other means was not made available to them. Too often, he believes, "colostomized patients are socially ostracized, a train of psychoneurotic manifestations may be suffered even to the point of suicide, marriage may be interfered with, and many are unfit for employment and thereby refused a means of livelihood." He cites histories from his and Babcock's files to substantiate this and states that to date they have transplanted the colostomy to the perineum, or anastomosed the colonic to the rectal stoma in 51 instances. These experiences are without question unique.

Many other surgeons of wide experience in the field of rectal carcinoma have recorded contrary opinions as regards colostomy. Collectively, their attitude might accurately be summed-up in the fol-

lowing comment by Arthur W. Allen in a recent editorial in *Surgery, Gynecology and Obstetrics* entitled *Restoration of Continuity versus Cure in Carcinoma of the Rectum*: "Colostomy is not burdensome to thousands of grateful individuals who have been cured of cancer. With reasonable care, they are free to carry on their business, athletic and social functions, without offense or inconvenience. Sentimental abhorrence of the colostomy by patient and physician has wasted many useful lives. Although none looks forward to a colostomy life with avid joy, few will refuse it if the entire situation is explained to them. Taught the simple principles concerning care of the colostomy, nearly all of these patients are comfortable and happy." And to this we might appropriately add the comment of D. B. Pfeiffer in a discussion of operations, the main purpose of which is avoidance of colostomy: "The chief and most vociferous objectors to colostomy are those who do not have them and do not need them to remain alive. It is hoped that no one will advocate or condone deliberate sacrifice of sound cancer surgery for any lesser consideration. Of course, the uncontrolled perineal colostomy is infinitely inferior to the abdominal anus in all respects except sentimental nonsense."

It is my own belief that colostomy is a basic part of any operation which offers the best chance of longevity to the individual suffering from cancer of the rectum and most individuals with cancer of the rectosigmoid. The average patient's abhorrence of colostomy can be overcome readily by anyone who is, himself, convinced that it is a tolerable state, compatible with a normal, comfortable, contented, useful and profitable existence. Infinite tact and patience will be rewarded by almost invariable acceptance of artificial abdominal anus.

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DISCUSSION OF PAPERS BY DRS. JOHNS AND GRAHAM

DR. J. M. EMMETT, Clifton Forge: I was invited to discuss the paper by Dr. Johns, but inasmuch as these papers are integral parts of the same subject I suppose my discussion may be directed to both.

The paper by Drs. Frank and Bill Johns represents a very excellent review of the development of surgery of the colon and rectum. The work which the Drs. Johns are doing in this field indicates a decisive interest in the problem and an excellent progressive accomplishment.

The major thought which the Drs. Johns have developed is that there should be a widespread excision of the malignant lesion of the colon with an immediate anastamosis. They and others have established the fact that such an accomplishment may be effected with no increase in operative mortality and without lowering the rate of operability; and, further, they have established that the incidence of cure is equally as great as it is with the various exteriorization operative procedures. All of us must have a degree of enthusiasm for any operative procedure which enables us to accomplish a satisfactory result by one stage effort.

Each year I find that we are doing fewer and fewer exteriorization procedures and more direct anastamoses. I am not able, however, to say that in any particular period we have divorced ourselves from the various modifications of the Mikulicz procedure, because I still think it will serve in certain instances a distinctive purpose. I have in mind those patients who come to the operating table with a moderate degree of edema in the bowel above the lesion, as result of a recent obstruction, or as a result of an incomplete obstruction at the time of operation. I have not been sufficiently brave to do an immediate anastamosis on this group of patients.

I want to agree *in toto* with what the Drs. Johns have said about the Miles operation as being a standardized procedure for one stage removals of cancer of the rectum and recto-sigmoid. We have attempted the many modifications suggested in the literature for the treatment of cancer of the rectum and recto-sigmoid, and I am convinced that the Miles procedure more completely fulfills the requirements of complete excision of the neoplasm with its glands and gland bearing structures than is offered in any other operative effort. The fact that this can be accomplished in one stage is further gratifying.

A very considerable enthusiasm is being manifested by certain surgeons and groups encouraging the preservation of the anal sphincter and a restoration of continuity of the large bowel in high recto-sigmoid lesions. I cannot believe that this is a basically sound effort and, when there is any element of doubt whatsoever as to one's ability to deliver the bowel and do a widespread excision for lesions in the recto-sigmoid, then I feel that the sphincter should be sacrificed unhesitatingly. The Drs. Johns did not emphasize the training which I be-

lieve should be employed in these people who have had a Miles operation to establish a regulated bowel function. I think Dr. Frank Lahey a few years ago called attention to the bowel habit which might be established in this group of patients by having them given regularly at the same time each morning a bowel irrigation. We have followed this routine religiously and our patients are very gratified not to be forced to wear a colostomy bag except in the early morning when they ordinarily have their bowel movement.

I am very interested in the increased operability which is established in the clinics that see patients with cancer of the colon. I am confident that we are operating today upon a large number of people with cancer, rectal, sigmoidal and colon, which we would have denied surgery had we seen them a few years ago. We have two patients who are alive after Miles operations three years ago who had demonstrable metastasis in the liver at the time of the initial operation. Both of these patients are free of symptoms. I have, of course, no explanation to offer as to what progress has been manifested in their liver metastasis. I cannot agree with the Drs. Johns entirely in their statement as to the role which the sulfa drugs may be expected to play in intestinal surgery. They said they employed sulfasuxidine regularly, but they did not employ other sulfa drugs intra- or extraperitoneally after their resections. I have no way of knowing just what contribution chemo-therapy has made in the field of large bowel surgery, but it is my distinctive impression that our own results have been materially benefitted by sulfasuxidine pre-operatively and by using sulfa drug intra-peritoneally around the anastamosis and giving such patients sulfa drugs intravenously after surgery. When streptomycin has been made available to the profession generally, I believe that it will be a further adjunct in treatment to avoid peritoneal contamination.

I think the Drs. Johns have rightfully called attention to the importance of the selection of anesthesia in this group of patients. I know of no greater contribution to surgery generally than has been offered by the qualified anesthetists who understand the physiology of anesthesia and who assume full responsibility for the patients' sustenance during the pre- and post-anesthesia stage. We have had a very limited experience with the continuous spinal anesthesia. Within recent years we have discontinued the routine employment of spinal anesthesia. Practically all of our patients are given cyclopropane with a high oxygen content.

A true evaluation of the patient's ability to stand massive surgery should, of course, take into consideration the degree of such a patient's anemia, his age, the location of the lesion, his degree of hypoproteinemia, his potential fluid loss and the experience and ability of the surgeon to resect the bowel with the least operative trauma. Fortunately all these factors have been emphasized over and over again in the literature covering this subject. The fact that there still exists differences in opinion as to the operative procedures indicated would emphasize the definite fact that the whole problem has not as yet been solved.

DR. R. L. PAYNE, Norfolk: I do not know when I have heard two finer papers than have been presented here this afternoon on this subject. I have heard this problem discussed before the American Surgical and the Southern Surgical Associations in the last two years; and I think Dr. Johns' paper on one side of the fence, so to speak, and Dr. Graham's paper on the other side have admirably covered about all we know in the conservative surgery of the colon. I congratulate the Drs. Johns on the very beautiful work they are doing, and yet sometimes I wonder if I could follow them in fee simple in their primary resections.

Dr. Graham asked me to discuss his paper. I think the trend of his paper has been largely the question of the elimination of colostomy and the fact that the primary resection that is now being done so ravenously, we might say, here and there is more or less a revival of a practice discarded a few years ago. When I first began my work, back in 1905 and 1906, we did Kraske's and Lockhart-Mummery operations, and I believe the fact that those operations failed was because we did not go high enough to get the lymphatics and the blood-vessel invasion. It is a question in my mind whether primary resections in some cases have failed and will fail, when time has answered the question, not only because they did not go high enough but, principally, because they did not go low enough. I do not fully subscribe to the idea that there is no extension of the lesion except upward, and that is not supported by the reports in the literature and in many clinics in the country. These operations permit the possibility of not enough removal of tissue high and not enough removal of tissue low. We have the lymphatics to remove; we have to remember we have the local involvement of the actual tumor growth itself; and particularly we must remember we have blood-vessel invasion in these growths. I like to feel when I am taking out a cancer anywhere, particularly of the rectosigmoid, that I can go as high as I like. I like to feel I do not have to pay attention to the blood supply of the proximal or distal portions of the colon as I would if I did an anastomosis. I like to feel that I can do for the patient the most radical surgery possible.

We have got to remember that many of these growths are very small. But even in small, localized lesions the metastases are frequently bigger than the lesions themselves.

I wonder if we should speak of these primary anastomoses as advances in surgery. We have all known how to do intestinal anastomoses for a long period of years and perform them skilfully without undue mortality. I wonder if we should speak of them as advances in surgery or rather as a means of securing ease and facility for the surgeon and permitting the patient to secure the sentimental end—namely, avoidance of colostomy. I wonder if we should defend these operations, in contrast to the combined abdominal-perineal, when

we know that so many patients have not the right to choose between a colostomy and the dangers of primary resection without colostomy. I remember a quotation that goes something like this: "On the plains of hesitation millions stop to rest, and, resting, they die." I am wondering if many patients do not die because of hesitating to choose colostomy.

I want to say one word about the preservation of the rectal sphincter. I want to condemn that. I do not believe we go wide enough in trying to preserve the rectal sphincter. I do not believe we go high enough. I do not believe the results will justify it. Time alone will tell, and even though we get statistics covering a five- or six- or seven-year period it will still be difficult to evaluate those statistics because of the different types of cases and their operability. I do not believe that will be determined until study has gone on over a long period of time.

A good many men have tried this operation of preservation of the rectal sphincter and have abandoned it. Dr. Lahey has abandoned it and has stated forcefully in print his reasons. A great many others have abandoned it. Dr. Lahey, in a discussion before the Southern Surgical Association last December, said he thought trying to preserve the rectal sphincter and remove a cancer and save the patient was an attempt to do two things at one time and that in trying to do two things at one time we are trying to get something for nothing. I wonder if I might not twist that a little and say the patient is getting nothing for something. He is impressed with the fact that his sphincter is being saved, but he may lose his life. I do not want to be dogmatic; I know it is in bad taste; but I do want to say that I think primary anastomosis low down, with preservation of the sphincter, definitely compromises the extent of the removal of distantly involved tissues; and it does seem as if, in the long run, the patient is definitely getting nothing for something.

DR. FRANK S. JOHNS, closing the discussion: The discussion of these two papers together has created some misunderstanding. To clarify and summarize, I may re-state our conclusions based on our results during the past few years. We prefer doing a resection of the colon with immediate anastomosis if this procedure can be carried out with safety. We have made no effort to do this operation in cases unsuitable for such a procedure.

Dr. Payne has brought up the question of preserving the sphincter ani. We have had no experience with that procedure, and therefore we do not feel qualified to condemn it. We report our last 40 cases of cancer of the colon in which we believed the growth could be removed either by exteriorization or by resection with immediate anastomosis. For all of them we have used the immediate anastomosis procedure, without an operative death. I repeat, there has been no exteriorization procedure in this series.

Of course, it is probable that we shall run into cases unsuitable for the one-stage operation; if so, we shall do the operation which is best suited to the removal of the growth and to the safety of the patient. It is our contention that with the proper pre-operative preparation of the patient, and with sound intestinal surgery, the great majority of cases of cancer of the colon should be done in one stage.

Please do not confuse this opinion with that as to the proper procedure for cases of cancer of the recto-sigmoid or for cases in which the lesion is too low in the pelvis for an end-to-end anastomosis to be made.

Radio Program Wins University Award.

The American Medical Association—National Broadcasting Company series of dramatized broadcasts on the progress of medicine in the United States during the 100 years of the A. M. A.'s existence, entitled "Doctors—Then and Now," received first award in the "Civic and Service Organizations" class at the 17th Annual Session of Ohio State University's American Exhibition of Educational Radio Programs, May 2-5 in Columbus.

The citation read: "For presenting to the listening audience in a dramatic and most effective manner the ideals and principles which motivate the members of the medical profession in their struggle against human illness."

The programs are planned by the Bureau of Health Education of the American Medical Association. This is the second award which the bureau has received since the establishment of awards by Ohio State University 11 years ago. In 1938 the same award was given for the program "To America's Schools."

TREATMENT OF DYSMENORRHEA*

HENRY C. SPALDING, M.D.,
Richmond, Virginia.

Dysmenorrhea is defined as painful menstruation. Two types are recognized—primary and secondary. Primary dysmenorrhea is painful menstruation, not associated with demonstrable pathologic disorder, while secondary dysmenorrhea is associated with organic gynecological diseases. It is of the first type that I have been told to talk.

Before dismissing secondary dysmenorrhea, however, I think it would be well to say that the alleviation of symptoms is dependent on correction of the concomitant gynecological pathology, which is almost always surgical in nature.

The term primary dysmenorrhea is synonymous with essential, idiopathic, intrinsic, or functional dysmenorrhea. The etiology is unknown. The preponderance of modern opinion, however, is that the symptoms arise largely by reason of motor dysfunction. Just this month at the annual meeting of the South Atlantic Association of Obstetricians and Gynecologists, which was held at Savannah, Dr. Richard Torpin, of the University of Georgia, had a paper presented by one of his associates showing intrauterine pressure curves, kymographically. These were taken, of course, by putting a small bag (hydrostatic bag) in the uterine cavity. It was shown that pressures on this bag during menses frequently exceeded the pressure exerted during labor. Also they showed that curves in patients with dysmenorrhea differed from the non-dysmenorrheic, in amplitude and frequency of contractions. In January of 1947, the *American Journal of Obstetrics and Gynecology* carried an article entitled "The Psychosomatic Aspect of Dysmenorrhea", which brings rather forcibly to our attention the psychic elements involved. Tremendous benefits can be given patients from time spent by someone like me who woefully lacks even a rudimentary knowledge of psychiatry.

Primary dysmenorrhea associated with cervical stenosis is remedied by cervical dilation. When retroversion or retroflexion is thought to be the cause, replacement of the uterus with insertion of a pessary is often efficaceous. The above procedures are possible in almost 100% of the cases in one's office, and are successful with many of those. Uterine hypoplasia, with or without anteflexion, is materially helped by pregnancy. In those patients who still have pain, and in those patients in whom I have found nothing in the pelvis, it is my practice to endeavor to improve their general health. This is done through the administration of thyroid to those with low BMR's, iron for the anemias, and vitamins when thought indicated, and then to employ one of the three following preparations: (1) Nethacetin in 5 mg. tablets one every four hours for 24 to 48 hours before the onset of the menses, and then to continue this for one or two days after the beginning of the menses. This, of course, is a sympathomimetic drug and is very similar in action to atropine. It does not, however, have some of the undesirable other effects of atropine, but atropine itself, in 1/100 gr. doses, is sometimes helpful. (2) Progesterone: to employ one of the hormone preparations, I usually use in the form of "Pranone" made by Schering in 5 or 10 mg. tablets two or three times a day, two days before menses and one day post-menstrually. (3) Prostigmin 15 mg. tablets three times a day for one or two days before menses and one day post-menstrually, has been found helpful.

When, by trial and error, one of the above preparations which does the most good is found, if relief then be not complete, there is no objection whatever to the employment of certain analgesic drugs—those coal tar derivatives, aspirin, phenacetin, etc., and combinations of these. It is my belief, however, that one cannot be too emphatic in denouncing the use of opiates and the greatest caution possible is advised in the use of derivatives of barbituric acid, because of their habit-forming potentialities.

When all medication fails and dysmenorrhea is truly invalidizing there is still one more thing to consider. I refer to pre-sacral sympathectomy. My own limited experience promises cure in 50% of the patients. This requires laparotomy and is not easy except when the anterior surface of the sacrum can be freely exposed. The literature carries much controversy about the worthwhileness of this procedure and I suggest an open mind be kept until a fair appraisal can be made.

*Read at the Symposium on Therapy, February 18-19, 1947, Medical College of Virginia, Richmond, Virginia.

MEDICAL SOCIETY OF VIRGINIA

PUBLIC RELATIONS

Reactions to "Test Your Medical IQ"

(First column, released for publication Thursday, May 1)



By Public Relations Office, Medical Society of Virginia
1200 E. Clay Street, Richmond 19, Va.

(Each question answered correctly counts 10 points. Score yourself by the answers at the bottom after you have completed the quiz. 70-80 is average, 80-90 good, 90-100 excellent.)

1. The term "trauma" means (SORE—WOUND—SWELLING).
2. More than one-half of the hospital beds in the United States are occupied by mental patients. (TRUE—FALSE).
3. Skin on the soles of your feet is approximately (¼—½—⅛) of an inch thick.
4. The leading cause of death among school children is (PNEUMONIA—RHEUMATIC FEVER—ACCIDENTS).
5. Is it possible to carry the typhoid germ without the "Carrier" himself having typhoid? (YES—NO.)
6. Napoleon was considered one of the greatest military geniuses of all time, yet he was defeated by what disease? (LEPROSY—TYPHUS FEVER—TUBERCULOSIS.)
7. "The National Health Act of 1947" introduced to the 80th Congress on February 10, 1947, by Senator Robert Taft (R-Ohio) proposed the creation of a new executive branch of the Government. (TRUE—FALSE.)
8. Immunity to what disease is determined by the Schick Test?_____
9. Refrigeration anesthesia is often used to gain time until a patient is strong enough for an operation. (TRUE—FALSE.)
10. Until a doctor can be contacted, a child with convulsions should be (MADE TO SIT UP—PLACED IN A BATH OF WARM WATER—PUT IN AN ICE PACK).

ANSWERS: (1) Trauma means wound or injury. (2) True. More than 600,000 are now in mental hospitals, and every year a quarter of a million new patients are added. (3) ¼. (4) Accidents. Six thousand five hundred school children are killed annually through accidents. (5) Yes. A "Carrier" is particularly dangerous around food, because the food may become infected. All food handlers should have thorough examinations. (6) Typhus Fever. The Grand Army set out for Russia 400,000 strong; and six months later the remnants—a scant 3,000—dismally returned. (7) True. The Agency proposed is: "The National Health Agency", to embrace all activities of the Federal Government relative to health. (8) Diphtheria. (9) True. Refrigeration anesthesia preserves injured tissue and restrains infection until a patient can gain the necessary strength for an operation. (10) Placed in a bath of warm water.

The people of Virginia are now being furnished regularly health and medical information. Forty-eight newspapers in the State are carrying the weekly quiz column, "Test Your Medical IQ", prepared by the Public Relations Department, Medical Society of Virginia.

Before the quiz column was started, each of the 112 weeklies, 23 evening dailies and six magazine

publications were written individually. It was pointed out that the purpose of the quiz was to dispense accurate, authoritative health and medical information which would be both interesting and helpful.

A wide range of reactions came in the 57 replies to the initial and follow-up letters, with 48 of the papers accepting the weekly quiz column for publication. From *The Alexandria Gazette* came the offer, "We are ready to do anything to help you in your program of furnishing the general public with medical information . . ." *The Bee* of Danville expressed the opinion that, "The feature is very timely in view of the general looseness of general knowledge about bodily ills." *The Norfolk Ledger-Dispatch* thinks, "It might serve a useful purpose, and therefore am glad to inform you that we will use it." From *The Progress-Index,* Petersburg, came the thought: "Your health column is most interesting and, we believe, may fill a definite need." *The Victoria Dispatch* said, "It is a good idea to educate the public regarding health and medical care."

Some papers expressed the belief that the column should be classified as advertising, and they did not believe that they should regard it as a public service feature. Almost without exception, the paper shortage was referred to. Ten papers wrote that this was the only reason for refusing the column.

While press advisers say that 48 acceptances is a high percentage, the Public Relations Department is of the opinion that more newspapers would carry the "Test Your Medical IQ" if local contacts were made. Since most weekly newspapers are run by a staff of a limited number, they perhaps are not prepared to give the necessary time to correspondence on matters of this nature. While only 18 papers replied to the original personal letter, 30 sent in postal cards which were attached to the follow-up letter. This is indicative that even more papers might accept this service if they were contacted by a local doctor.

"Test Your Medical IQ" began the first week in May on a 13-week trial period through July 24. Before this quarter of the year is out, editors of the papers will be asked to evaluate the column, and these evaluations combined with the reactions of members of the medical profession could serve a useful purpose in determining future use we might make of such a column and the press in this connection.

Front page space given to this column in some newspapers is indicative of the regard held for the quiz column by some editors.

Radio Program Successfully Launched.

The initial radio program of the Medical Society of Virginia is well under way, with twelve key radio stations in Virginia broadcasting "Tell Me Doctor" daily, Monday through Friday.

Gratifying comments have already begun to come from the doctors and lay public on the venture. The following letter was received by the Public Relations Department on April 29:

April 28, 1947.

DEAR MR. JOHNSON:

As a member of the Medical Society of Virginia, I have received your circular letter of April tenth with reference to your proposed use of the advantages of radio to carry on a program which will reach apparently nearly all of the people in Virginia.

I consider this one of the most progressive steps which our Society has taken, and I would like to congratulate you and Doctor Roper upon taking this step.

I am particularly interested in this as I believe that I sent out many, many years ago from the Naval Radio Center then at Arlington the first public health national broadcast which had been sent out.

With kind personal regards,

Sincerely yours,
HUGH S. CUMMING,
Surgeon General, U. S. Public Health Service (Retired)

Several letters have come to the Public Relations Department both from doctors and from radio stations inquiring why "Tell Me Doctor" was not scheduled on a specific station. After some conference with radio engineers, the best advice which this office was able to secure prior to the beginning of the series was that Virginia could be rather well covered by twelve radio stations, and possibly by eleven. While it would have been ideal to schedule "Tell Me Doctor" on every radio station in Virginia, the expense of such an undertaking made it prohibitive. There are more than 25 radio stations in Virginia at the present time, with several more planning to open in the near future, we are advised. To schedule "Tell Me Doctor" on all of the local radio stations would have doubled the cost of the present series, which may cost approximately $2,000, despite the fact that time for the broadcasts is being donated by the stations. If the time were purchased,

it would cost more than $7,000 for that alone, on the twelve stations.

Considering the cost and coverage of the stations selected, it was deemed expedient to use only those stations necessary to cover the State.

A number of doctors have stated that they did not receive their office cards for the radio program. This possibility was anticipated by this office, and a supply has been sent to the secretary of each Medical Society to serve those whom the cards did not reach.

The excellent coverage given the launching of "Tell Me Doctor" by newspapers over the State was indeed gratifying. One doctor is paying for a weekly advertisement in his newspaper giving notice of the program, and has also requested his Division Superintendent of Schools to give publicity to this program through the schools. Several doctors have written their local stations in appreciation of their cooperation in broadcasting the program. Expressions of appreciation by members of the Medical Society of Virginia are conducive to a good relationship between the radio or press, and the medical profession.

Already we are convinced that a great number of doctors have not seen the reception room announcement cards announcing the "Tell Me Doctor" program. Even though not all of our literature is sent out first class, materials going from this office are labelled with a return address.

Voluntary Pre-Payment Medical Care and Hospitalization Plans Conference.

Many requests have come to us to assist in the promotion of the voluntary pre-payment medical care and hospitalization plans. Word has gone out from the American Medical Association that emphasis should be given to these immediately.

Our feeling was that whatever we did in this regard should be guided by the advice of those familiar with such plans in operation in Virginia.

For this purpose, a conference was called at the John Marshall Hotel in Richmond, Monday, May 5 from 10:30 a. m. to 4:00 o'clock, to which representatives of voluntary non-profit medical care and hospitalization plans were invited. Dr. Alex F. Robertson of Staunton, chairman of the Board of the Virginia Medical Service Association, presided. The following were present:

Mr. Leonard O. Key, Roanoke, Mr. M. Haskins Coleman, Richmond, Dr. W. L. Powell, Roanoke, Mr. Gibson Howell, Richmond; Dr. W. R. Pretlow, Warrenton; Dr. Vincent Archer, Charlottesville; Dr. Frank A. Farmer, Roanoke; Dr. Charles H. Peterson, Roanoke; Mr. William R. Lowe, Norfolk; Mr. Henry S. Johnson, Richmond.

It is hoped that an approach can be built around the suggestions coming out of the Conference, and others that come to us.

Dr. Mettauer Rides Again!

While the little black carriage drawn by two black bay horses was not conveying Dr. John Peter Mettauer around Virginia the first week in May, he got quite a ride on the airwaves and on newsprint.

The first lap of the journey was covered by a feature story furnished the Associated Press by the Public Relations Department. The two-column story and picture of Dr. Mettauer received statewide coverage. The following Thursday, weekly newspapers over Virginia carried a story released through the Virginia Press Association.

Station WMBG, the NBC radio station in Richmond, broadcast a local program Thursday evening, May 8 from 10:45 to 11:00. A dramatic cast from WMBG gave the first part of the program, which was a blank verse summary of Dr. Mettauer's life. The latter part of the program was devoted to a talk by Dr. M. Pierce Rucker on the significance of the metallic suture work Dr. Mettauer performed, and a talk by Dr. Wyndham B. Blanton on the operations he performed.

The nationwide thirty-minute broadcast came Saturday afternoon, May 10, on the "Doctors—Then and Now" program from NBC from 3:00 to 3:30 Eastern Standard Time. The dramatic script referred to the influence on Dr. Mettauer's life of his father, General Lafayette, and his professor, Dr. Wistar, at the University of Pennsylvania.

The last three minutes, approximately, of the program were covered by Dr. Wingate M. Johnson, editor of the *North Carolina Medical Journal.* His general theme was a report of today's health and medical care in Virginia and North Carolina.

The editorial in this issue of the *Virginia Medical Monthly* was probably the outgrowth of a revived interest in the work of Dr. John Peter Mettauer, a great Virginian.

THE FORUM

Counties and Cities of Virginia With Names and Addresses of Coroners.

Dr. H. S. Breyfogle, who early this year assumed the duties of first Chief Medical Examiner of Virginia, in cooperation with the Commission on Post-Mortem Examinations, announces the appointment of the following doctors as coroners in the various counties and cities of Virginia:

NAME OF COUNTY AND NAME AND ADDRESS OF CORONER

ACCOMAC
Dr. J. L. DeCormis, Accomac.
Dr. R. J. White, Keller.

ALBEMARLE
Dr. E. D. Davis, Crozet.
Dr. Percy Harris, Scottsville.

ALLEGHANY
Dr. W. J. Ellis, Covington.
Dr. L. A. Houff, Clifton Forge.

AMELIA
Dr. J. T. O'Neal, Amelia.

AMHERST
Dr. S. R. Arnold, Amherst.
Dr. Lyddane Miller, Amherst.

APPOMATTOX
Dr. C. G. O'Brien, Appomattox.

ARLINGTON
Dr. W. C. Welburn, Arlington.

AUGUSTA
No coroner.

BATH
Dr. I. T. Hornbarger, Hot Springs.

BEDFORD
Dr. E. L. Johnson, Bedford.
Dr. W. V. Rucker, Bedford.

BLAND
No coroner.

BOTETOURT
No coroner.

BRUNSWICK
Dr. T. H. Anderson, Lawrenceville.
Dr. F. N. Mallory, Lawrenceville.
Dr. T. H. Valentine, Lawrenceville.

BUCHANAN
Dr. J. S. Richardson, Grundy.

BUCKINGHAM
Dr. Garland Dyches, Dillwyn.
Dr. W. A. Pennington, Buckingham.

CAMPBELL
Dr. R. H. Cross, Concord Depot.
Dr. J. P. Kent, Altavista.
Dr. W. O. Tune, Brookneal.

CAROLINE
Dr. J. G. Broaddus, Bowling Green.

CARROLL
Dr. J. G. Cox, Hillsville.
Dr. W. A. Porter, Hillsville.

CHARLES CITY
Dr. J. R. Parker, Providence Forge.

CHARLOTTE
Dr. H. C. Chalmers, Brookneal.
Dr. Thomas Watkins, Drakes Branch.

CHESTERFIELD*
Dr. W. H. Copley, Richmond.
Dr. P. L. Hill, Colonial Heights (Petersburg district).
Dr. J. F. Parkinson, Chester.

CLARKE
Dr. Frank Tappan, Berryville.

CRAIG
Dr. W. F. Mitchell, New Castle.

CULPEPER
Dr. J. L. Stringfellow, Culpeper.

CUMBERLAND
Dr. E. B. Nuckols, Cumberland.
Dr. N. P. Snead, Cartersville.

DICKENSON
Dr. R. L. Phipps, Clintwood.
Dr. T. C. Sutherland, Haysi.

DINWIDDIE
Dr. W. J. Mayes, Church Road.

ELIZABETH CITY
Dr. P. J. Parker, Hampton.

ESSEX
Dr. J. W. Chinn, Tappahannock.
Dr. J. M. Gouldin, Tappahannock.

FAIRFAX
Dr. Nelson Podolnick, East Falls Church.

FAUQUIER
Dr. G. H. Davis, Warrenton.

FLOYD
Dr. F. C. Bedsaul, Floyd.

FLUVANNA
Dr. A. C. Whitley, Palmyra.
Dr. J. H. Yeatman, Fork Union.

FRANKLIN
Dr. E. C. Jamison, Rocky Mount.
Dr. F. B. Wolfe, Rocky Mount.

FREDERICK
Dr. T. A. Gibson, Winchester.
Dr. J. C. Hortenstine, Winchester.
Dr. E. W. Lacy, Winchester.
Dr. George Smith, Winchester.

GILES
No coroner.

*For parts of Chesterfield County not within these three districts coroners for Petersburg, Hopewell, Richmond, Charles City, Dinwiddie, Amelia or Powhatan should be notified, whichever is nearest to the place of death.

NAME OF COUNTY AND NAME AND ADDRESS OF CORONER

GLOUCESTER
Dr. H. A. Tabb, Gloucester.
Dr. J. W. Smith, Hayes Store.

GOOCHLAND
Dr. W. S. Lloyd, Goochland.

GRAYSON
Dr. J. C. Moxley, Independence.

GREENE
Dr. M. D. Foster, Stanardsville.

GREENSVILLE
Dr. M. G. Baynard, Emporia.
Dr. G. M. Naff, Emporia.

HALIFAX
Dr. C. B. White, Halifax.

HANOVER
Dr. A. B. Gravatt, Ellerson.
Dr. A. E. Murray, Beaverdam.
Dr. Judson Vaughan, Ashland.

HENRICO
Dr. M. B. Lamberth, Richmond.
Dr. J. C. LeFon, Richmond.

HENRY
Dr. L. A. Faudree, Bassett.
Dr. D. H. Mason, Ridgeway.

HIGHLAND
Dr. C. B. Fox, Monterey.
Dr. B. T. Swecker, Blue Grass.

ISLE OF WIGHT
Dr. Rea Parker, Smithfield.

JAMES CITY
Dr. A. M. Sneed, Toano.

KING GEORGE
Dr. R. N. Harris, Port Royal.

KING AND QUEEN
Dr. R. D. Bates, Newtown.

KING WILLIAM
Dr. W. H. Hosfield, West Point.
Dr. A. W. Lewis, Aylett.

LANCASTER
Dr. A. B. Gravatt, Jr., Kilmarnock.

LEE
Dr. T. S. Ely, Jonesville.
Dr. G. C. Sumpter, Rose Hill.

LOUDOUN
Dr. W. P. Frazer, Hamilton.

LOUISA
Dr. H. W. Judd, Mineral.

LUNENBURG
Dr. H. B. Showalter, Kenbridge.

MADISON
Dr. A. E. Powell, Madison.

MATHEWS
Dr. R. B. Bowles, Mathews.
Dr. J. R. Gill, Mathews.

NAME OF COUNTY AND NAME AND ADDRESS OF CORONER

MECKLENBURG
Dr. H. H. Braxton, Chase City.
Dr. W. J. Ozlin, South Hill.

MIDDLESEX
Dr. H. F. Hoskins, Saluda.

MONTGOMERY
Dr. C. F. Manges, Blacksburg.
Dr. A. M. Showalter, Christiansburg.

NANSEMOND
Dr. G. R. Joyner, Suffolk.

NELSON
Dr. Estes Kidd, Lovingston.

NEW KENT
Dr. J. R. Parker, Providence Forge.

NORFOLK
Dr. L. C. Ferebee, South Norfolk.

NORTHAMPTON
Dr. J. E. Gladstone, Exmore.
Dr. J. G. Goode, Cape Charles.

NORTHUMBERLAND
Dr. M. M. Neale, Heathsville.

NOTTOWAY
Dr. J. M. Hurt, Blackstone.

ORANGE
Dr. J. N. Clore, Orange.
Dr. H. C. McCoy, Gordonsville.

PAGE
Dr. G. H. Long, Luray.

PATRICK
Dr. A. M. Gates, Ararat.
Dr. B. A. Hopkins, Stuart.

PITTSYLVANIA
Dr. H. H. Hammer, Chatham.

POWHATAN
Dr. W. S. Lloyd, Goochland.

PRINCE EDWARD
Dr. W. E. Smith, Farmville.

PRINCE GEORGE
Dr. W. C. Webb, Disputanta.

PRINCESS ANNE
Dr. H. F. Dormire, Virginia Beach.

PRINCE WILLIAM
Dr. E. H. Marstellar, Manassas.

PULASKI
No coroner.

RAPPAHANNOCK
Dr. J. P. Snead, Sperryville.

RICHMOND
Dr. J. H. Hare, Warsaw.

ROANOKE
Dr. John Hurt, Vinton.
Dr. A. J. Russo, Salem.
Dr. Russell Smiley, Salem.

ROCKBRIDGE
Dr. E. V. Brush, Lexington.
Dr. E. P. Tompkins, Lexington.

NAME OF COUNTY AND NAME AND ADDRESS OF CORONER

ROCKINGHAM
Dr. F. L. Byers, Harrisonburg.

RUSSELL
Dr. W. C. Elliott, Lebanon.

SCOTT
Dr. W. L. Griggs, Jr., Gate City.

SHENANDOAH
Dr. H. W. Miller, Woodstock.

SMYTH
Dr. D. C. Boatwright, Marion.

SOUTHAMPTON
Dr. J. J. Grizzard, Branchville.
Dr. T. A. Morgan, Franklin.

SPOTSYLVANIA
Dr. J. E. Cole, Fredericksburg.

STAFFORD
Dr. L. F. Lee, Fredericksburg.

SURRY
Dr. B. H. Knight, Surry.

SUSSEX
Dr. R. B. McEwen, Wakefield.
Dr. M. Rosenburg, Waverly.

TAZEWELL
Dr. Rufus Brittain, Tazewell.
Dr. James Peery, Richlands.
Dr. H. A. Porter, Boissevain.

WARREN
Dr. D. M. Kipps, Front Royal.

WARWICK
Dr. M. L. Horne, Hilton Village.
Dr. C. P. Jones, Hilton Village.

WASHINGTON
Dr. G. H. Wolfe, Abingdon.
Dr. J. A. Wolfe, Abingdon.

WESTMORELAND
Dr. E. T. Ames, Montross.
Dr. C. H. Griffith, Machodoc.

WISE
Dr. N. F. Hix, Wise.

WYTHE
Dr. E. M. Chitwood, Wytheville.

YORK
Dr. L. O. Powell, Seaford.

NAME OF CITIES AND NAME OF CORONER

ALEXANDRIA
Dr. J. A. Sims.

BRISTOL
Dr. Frederick Thackston.

BUENA VISTA
Dr. R. R. Eason.

CHARLOTTESVILLE
Dr. Gregory Magruder.
Dr. James B. Twyman.

CLIFTON FORGE
Dr. L. A. Houff.

NAME OF CITIES AND NAME OF CORONER

DANVILLE
Dr. H. A. Wiseman, Jr.

FREDERICKBURG
Dr. J. E. Cole.

HAMPTON
Dr. P. J. Parker.

HARRISONBURG
Dr. F. L. Byers.

HOPEWELL
Dr. A. T. Brickhouse.

LYNCHBURG
Dr. J. A. Wilkins.

MARTINSVILLE
No coroner.

NEWPORT NEWS
Dr. Thomas D. Walker.

NORFOLK
Dr. C. D. J. MacDonald.

PETERSBURG
Dr. Thomas D. Pope.

PORTSMOUTH
Dr. R. L. Corbell.

RADFORD
Dr. H. L. Dean.
Dr. T. L. Gemmill.

RICHMOND
Dr. K. J. Cherry.
Dr. M. Markowitz.
Dr. E. L. Shelton, Jr.

Coroners for the city of Richmond may be reached by calling the Medical College of Virginia, 7-1800 day or night.

ROANOKE
Dr. Charles M. Irvin.

SOUTH NORFOLK
Dr. L. C. Ferebee.

STAUNTON
Dr. R. P. Bell, Jr.
Dr. Charles F. Gaylord.

SUFFOLK
Dr. E. C. Joyner.

WILLIAMSBURG
Dr. J. M. Henderson.

WINCHESTER
Dr. T. A. Gibson.
Dr. J. C. Hortenstine.
Dr. E. W. Lacy.
Dr. George Smith.

PHYSICIANS OFFICIALLY DESIGNATED TO PERFORM AUTOPSIES

Dr. Frank Apperly, Department of Pathology, Medical College of Virginia, Richmond.
Dr. Regena Beck, Stuart Circle Hospital, Richmond.
Dr. M. B. Beecroft, Elizabeth Buxton Hospital, Newport News.

PHYSICIANS OFFICIALLY DESIGNATED TO PERFORM AUTOPSIES

Dr. James Cash, Department of Pathology, University of Virginia Hospital, University of Virginia School of Medicine, Charlottesville.

Dr. H. L. Dean, Coroner of the city of Radford, Gardner Building, Radford.

Dr. M. L. Dreyfuss, Chesapeake and Ohio Hospital, Clifton Forge.

Dr. L. C. Ferebee, Coroner of Norfolk County and the city of South Norfolk, 1220 Chesapeake Avenue, South Norfolk.

Dr. K. D. Graves, Medical Arts Building, Roanoke.

Dr. Charles Irvin, Coroner of the city of Roanoke, 31 Wellington Avenue, Roanoke.

Dr. L. S. Kau, Winchester Memorial Hospital, Winchester.

Dr. J. D. Kernodle, Alexandria Hospital, Alexandria.

Dr. Joseph Kriz, McGuire Hospital, Richmond.

Dr. C. D. J. MacDonald, Coroner of the city of Norfolk, Norfolk.

Dr. E. H. Marstellar, Coroner of Prince William County, Manassas.

Dr. T. J. Moran, Memorial Hospital, Danville.

Dr. L. J. Motyca, Norfolk General Hospital, Norfolk.

Dr. Francis Parker, Department of Pathology, University of Virginia Hospital, University of Virginia School of Medicine, Charlottesville.

Dr. James Peery, Coroner of Tazewell County, Mattie Williams Hospital, Richlands.

Dr. R. L. Phipps, Coroner of Dickenson County, Dickenson County Hospital, Clintwood.

Dr. Simon Russi, McGuire Hospital, Richmond.

Dr. J. H. Scherer, Grace Hospital, Richmond.

Dr. W. Edward Smith, Coroner of Prince Edward County, Farmville.

Dr. A. F. Strauss, DePaul Hospital, Norfolk.

Dr. W. J. Sturgis, Jr., Memorial Hospital, Nassawadox.

Dr. E. P. Tompkins, Coroner of Rockbridge County, Lexington.

Dr. James Wilkins, Coroner of the city of Lynchburg, Allied Arts Building, Lynchburg.

Dr. G. Hunter Wolfe, Coroner of Washington County, Abingdon.

An Appreciation of Dr. Moncure.

On May 2, 1947 at the regular monthly meeting of the Princess Anne County Medical Society, the following resolutions were presented:

First: Whereas our beloved friend, Dr. P. St. L. Moncure has attained the remarkable goal of fifty years' service in the Medical profession, during which time he has held many positions of eminence and importance throughout the State, we feel he has used marked skill, wisdom and discretion in the discharge of his duties.

Second: That his lofty ideals, his sincerity of purpose, his high ethical standards, his marked generosity, and his kindliness have endeared him to all who know him.

Third: That throughout this career, his interest and helpfulness to internes and young doctors has been outstanding, the nursing profession has had a staunch friend in him, and he has been influential in maintaining the high standards of the hospitals of Norfolk.

Fourth: That we extend to Dr. Moncure our hearty congratulations, that we express our sincere appreciation for his many contributions to the Medical profession, and we wish for him many more years of usefulness.

Fifth: That a copy of these resolutions be sent to Dr. Moncure, included in the minutes of the Society, and published in the VIRGINIA MEDICAL MONTHLY.

CORA Z. CORPENING, *President*
R. A. STATA, *Secretary*
Princess Anne Medical Society.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President—MRS. J. E. HAMNER, Petersburg
President-Elect—MRS. J. L. DECORMIS, Accomac
Recording Secretary—MRS. M. H. HARRIS, West Point
Corresponding Secretary,
MRS. MEADE EDMUNDS, Petersburg
Treasurer—MRS. REUBEN SIMMS, Richmond
Editorial Chairman—MRS. E. HOLLAND TROWER, Eastville

Mid-Tidewater Medical Society Auxiliary.

The Auxiliary to the Mid-Tidewater Medical Society met in Gloucester on April 23rd. There was a small but interested attendance. It was hoped to get more of the young wives interested and regain some of the older members which were lost during the war years.

The next meeting will be in Urbanna, at which time it is planned to have an interesting program on Cancer.

MRS. M. H. HARRIS,
President.

PUBLIC HEALTH

L. J. ROPER, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for April 1947, as compared with the same month in 1946, and for the period of January through April, 1947, compared with the same period in 1946, follows:

	April 1947	April 1946	Jan.-April 1947	Jan.-April 1946
Typhoid and Paratyphoid	4	5	22	24
Diarrhea and Dysentery	347	150	1,361	558
Measles	1,367	2,608	4,743	6,999
Scarlet Fever	120	406	658	1,513
Diphtheria	18	27	108	168
Poliomyelitis	0	0	12	6
Meningitis	13	25	47	116
Undulant Fever	7	3	16	13
Rocky Mountain Spotted Fever	0	2	1	2
Tularemia	0	3	26	26

BRUCELLOSIS (Undulant Fever)

A considerable increase in the prevalence of Brucellosis in Virginia occurred during 1946. There were 73 cases reported this year as compared to a 1941-1945 average of 31 infections and a previous high year of 50 cases in 1938. During the first four months of 1947 a reported incidence of 18 cases would indicate a continuing high prevalence. Brucellosis in Virginia has largely proven of cattle origin and, as Bang's disease in beef and dairy herds has increased materially during the past several years, greater incidence of infection in man is to be expected. The case fatality rate seldom exceeds 2 per cent, but Brucellosis is a serious and an important illness as duration, complications and economic loss are considered.

Human infection in Virginia is largely due to Brucella abortus contracted directly or indirectly from cattle infected with Bang's disease. It obviously follows that those using raw milk and unpasteurized dairy products are predisposed to infection. Similarly the disease becomes occupational with higher prevalence in farmers, veterinarians, meat handlers and others repeatedly exposed to contaminated animals and animal products. Potential dangers of human brucellosis also exist in the goat and hog industries through brucella melitensis and brucella suis infections, respectively.

In the prevention of brucellosis the adequate pasteurization of milk and of all other dairy products is of utmost importance. We are all aware of the effectiveness of this process in the prevention of other communicable diseases and pasteurization is equally necessitated in the destruction of brucella. The principal problem, however, remains one of control over the reservoirs of infection in cattle and other domestic animals. In this connection the active immunization of the young animal with subsidized condemnation of all positive adult reactors is recommended by some authorities. Quarantine of all imported cattle until certification of freedom from infection is available may also be an important control measure. Special measures must be practiced to safeguard those exposed by occupation to contact infection. The brucella may gain access to the human body through microscopic breaks in skin or mucous membrane.

The diagnosis of brucellosis is frequently difficult, showing a symptomatic picture common to other systemic infections. However, a careful history indicating use of unpasteurized dairy products or the occupation with possible contact may be important. An insidious onset, the febrile waves marked by severe headache with generalized body aches and pains, are suggestive of infection. The laboratory may be of considerable help in diagnosis. The positive blood culture now frequently found would be conclusive proof of infection. Similarly, agglutination tests during the second week or later of illness may be helpful. With a negative previous history of brucellosis an agglutination titer of 1:80 or more is considered significant.

Diagnostic aid is also offered by the opsonocytophagic test. In this the patient's blood is incubated with brucella organisms. Bacterial phagocytosis is then counted microscopically. A positive result is interpreted if most white cells show bacterial ingestion.

A simple test may also be used when agglutina-

tion tests have consistently proven negative. One-tenth cubic centimeter of a diluted brucella vaccine or protein is injected intradermally. A positive reaction indicates past or present infection.

The treatment of brucellosis remains on a controversial basis along specific modes of therapy. Treatment with vaccine, serum or the sulfonamides is considered of questionable value. Latterly intensive streptomycin therapy in the hands of scattered clinicians in the acute or sub-acute case has shown some promising results. Supportive and symptomatic treatment with confinement in bed during the febrile periods is always indicated.

BOOK ANNOUNCEMENTS

Health Insurance in the United States. By NATHAN SINAI, DR. P. H.; ODIN W. ANDERSON; and MELVIN L. DOLLAR, School of Public Health, University of Michigan. New York, The Commonwealth Fund. 1946. xvi-115 pages. Cloth. Price $1.50.

In the old days, the good old days of course, it used to be said that the two sure things in this world were death and taxes. Today change has become a third certainty. Of course, there has always been some change but heretofore it has progressed so slowly that no one was much disturbed in his life time. Now almost all aspects of our lives are undergoing such rapid changes that many of us are disturbed.

The first and most primitive reaction to change is to oppose it and in no field has the opposition been more bitter than in medicine. This is the more surprising as the doctors are a well-educated group, not only in medicine proper but also more or less in biology and sociology and should be able to see the situation from a broader point of view.

Nevertheless, it seems to be exceedingly difficult for most of us to grasp and understand change when we are right in it. We tend to become confused and irritated at the loss of our old and familiar standards. It is to help in our orientation that the New York Academy of Medicine and the Commonwealth Fund have brought out this series of little books of which this is the tenth.

The title of this booklet is somewhat misleading as it is not health insurance but insurance against unexpected or sudden sickness. It describes the various ways that have been tried to spread the cost of a devastating illness or accident over some previous months or years. This may conduce to the mental health of the patient when he recovers and finds that he is not hopelessly in debt, but no way has ever been found to insure health. There is not even any generally recognized standard of biological health. In fact, most patients are considered recovered when they can get along about as well as before (the ordinary social criterion of health).

The doctors have done little more than this because they have largely limited their efforts to what the patient was willing and able to pay for, and most patients have not realized the value of health. This is one of the subjects which we may expect will receive more attention in the good days ahead.

E. C. L. MILLER.

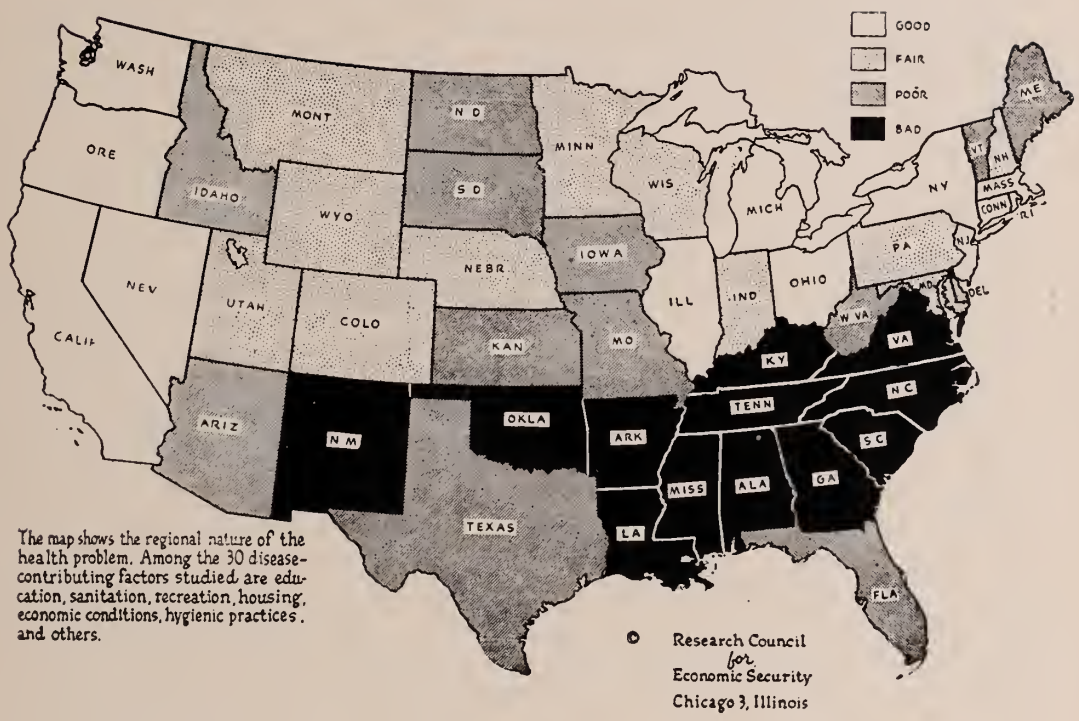
Practical Physiological Chemistry. By PHILIP B. HAWK, Ph.D., President, Food Research Laboratories, Inc., Long Island City, New York; BERNARD L. OSER, Ph.D., Director, Food Research Laboratories, Inc.; and WILLIAM H. SUMMERSON, Ph.D., Associate Professor of Biochemistry. Cornell University Medical College, New York City. 12th Edition. Philadelphia, The Blakiston Company, 1947. xiv-1323 pages. Illustrated. Cloth. Price $10.00.

Hawk, Oser and Summerson have prepared a completely revised and modern edition of Hawk's well-known practical text (now in its fortieth year) which was last revised by Hawk and Bergeim ten years ago. New material includes sections on the Warburg tissue-slice technique, sulfonamide drugs, antibiotics, microbiological vitamin assays, isotopes, photometry, electrophoresis and the polarograph. The quantitative analysis of blood and urine is covered thoroughly, and many other biochemical procedures are presented in detail. The text includes much recent material, and an attempt has been made to make the volume a complete text and manual. Recent advances are presented in the light of their clinical applications. This book is recommended to all who deal with biochemical procedures, their interpretation and significance.

LYNN D. F. ABBOTT, JR.

EDITORIALS

Our National Health Problem



Population

ACCORDING to the 16th census of the United States, 35.3% of Virginia's population was urban, whereas 56.5% of the population of the whole United States lived in cities. Virginia was more rural than Wyoming. Only Alabama, Arkansas, Kentucky, Mississippi, New Mexico, North Carolina, North Dakota, South Carolina, South Dakota, Tennessee, Vermont and West Virginia had a higher percentage of country people. In Virginia 10.4% of her families had 3 or more children under 10 years of age. On this basis she ranked 9th in the large family column. Twenty-four and seven-tenths per cent of her population were non-white and only 5.8% of her population was over 65 years of age. In this respect she is surpassed by 34 states, among them Washington, Oregon and the Dakotas, comparatively new states in which one would not expect an aging population. In resort states like Florida and California one would expect to find a high percentage of old people and such proves to be the case. Of the 12 states with fewer persons over 65 years than Virginia, eight are in the South. Thus we see that Virginia has an essentially rural population with large families and a rather high percentage of negroes. When you take into consideration that the average income per capita is $125.00 less than the average for the nation, you get some idea of Virginia's problem.

Metallic Sutures

IN this day of clean surgery when the surgeon has adequate means of controlling the bacterial flora in wounds, it is difficult to realize why our predecessors thought so highly of metallic sutures. In the first half of the last century, before antisepsis and before anesthesia, wounds rarely healed by "first intention" and people spoke of "laudable pus", two terms that have disappeared from present day nomenclature. Injury to the bladder was a common complication of childbirth in those days and nothing could be done to cure these unfortunate women of their urinary incontinence. Even simple lacerations were left unrepaired because they did not heal when sutured. The common practice was to strap the woman's knees together for a week or more and hope for results.

Metallic sutures changed all this. In 1858 Marion Sims in his "Anniversary Discourse" before the New York Academy of Medicine spoke of the use of silver sutures as the great Surgical Achievement of the nineteenth century. He goes on to say, "In 1845 I conceived the idea of curing vesico-vaginal fistula, and entered upon the broad field of experiment with all the ardor and enthusiasm of a devotee. After nearly four years of fruitless labor, silver wire was fortunately substituted for silk as a suture and lo; a new era dawns upon surgery".—His first success was the 30th operation on that particular patient, truly a proper term for that poor colored girl. Sims attributes the founding of the Woman's Hospital of the State of New York to that happy occurrence. Others date the founding of modern gynecology to this event, calling Sims the Father of Gynecology.

It would seem worth while therefore to look into the history of metallic sutures. According to Sir James Y. Simpson (*Medical Times and Gazette,* June 5, 1858), Hippocrates and the ancients used gold and silver wire to hold together teeth in cases of fracture of the jaw. Celsus mentions gold and iron threads only to condemn them for use in animal tissues. The first time that metal was deliberately put into the tissues was in connection with attempts to cure inguinal hernia. Bernard Memis, Franco, Fallopius and Paré applied what they termed the "golden stitch" or "golden tie" to the neck of the hernia sac. Aveling (*Medical Times and Gazette,* January 22, 1859) attributes the first use of metallic sutures to Fabricius ab Aquapendente. "After describing the ligature of Fallapius which was of thread, and like the one which we, until lately, have been using, and that of Guido, which was made of metal, and hooked the two lips of a wound together; he says he provides himself with many flexible needles of iron or of brass, made soft, except at the point, over burning coals. These he passes through the lips of the wound, and then turns back the extremities, the right to the left and the left to the right, fitting them over the wound either straightly and plainly, or by making a knot." Fabricius gives the following reasons for preferring such sutures: 1. Iron does not eat into the flesh. 2. It does not ulcerate out. 3. It does not stretch and break. 4. It is not rotted by the discharge.

In the 18th century Purmann of Breslau used silver to advantage in wounds of the tongue, and in 1746 Mihles speaks of using silver and gold threads in the repair of hare-lip, but Dieffenbach is credited with being the first modern surgeon to use metallic sutures. In a paper on Staphyorrhaphy, published in 1826, he reported several cases in which he used lead thread to close the defect in the palate. He spoke of the advantage of twisting the wire, over having to tie a knot deep in the oral cavity. Gosset in London used gilded silver wire in a successful vesico-vaginal fistula opera-

tion in 1833, but it was in America that the subject of metallic sutures received the greatest attention.

In 1832 Dr. J. P. Mettauer used lead sutures in the successful repair of an old laceration of the vagina and rectum. He had previously (1817) used lead thread in the repair of cleft palate. In his paper "On Staphylorrhaphy" in 1837 he gives Dieffenbach the credit for introducing lead sutures. It seems remarkable that he should have learned of Dieffenbach's work so quickly. The explanation is that the Lancet for 1826 gave a detailed account of Dieffenbach's operation describing the size of the lead wire and stating that it should be made of pure lead. Mettauer employed the lead suture in 1838 for the successful repair of vesico-vaginal fistula. In 1829 Levert of Mobile, Alabama, reported a series of experiments on the reactions of various ligatures in animal tissues. He tied the carotid and the femoral arteries of a dog with lead, silver, gold and platinum wire and also with silk. The metal ligatures became encysted without causing inflammation, whereas the silk was invariably the center of small pockets of pus. He stated that Physick had suggested lead because of the well-known fact that lead bullets caused no inflammation in the tissues even after many years, but so far as Levert knew such ligatures had never been tried. His work except for notice by Marion Sims and Bozeman has escaped recognition.

Dieffenbach who is looked on as the author of metallic sutures in Europe did not recognize their importance and failed in a field where their use in America attained such remarkable success. He said of vesico-vaginal fistula (1836), "I have operated on a woman eighteen times and discharged her unrelieved. I have gathered together large rooms full of these unhappy women from all parts of the country, and I have exhausted all resources and have cured but few." Mettauer recognized their value and used them not only in staphylorrhaphy but with equal success in perineorraphies and vesico-vaginal fistula operations. Sims recognized their value and used them in all fields of surgery and talked about them incessantly and even bombastically (Editorial New England J. Med. 233:631. 1945).

When antisepsis and later asepsis began to be practiced, the choice of suture material became relatively less important. Wounds healed with any kind of clean sutures. Now the surgeon has as many kinds of suture material from which to choose as he has kinds of anesthesia. Among the non-absorbable sutures may be mentioned silk, linen, cotton, nylon, plastigut, fibreglas, horse hair, kangaroo tendon, fascia, silk worm gut, silver and stainless steel. The lowly lead has disappeared from the list.

In 1932 Babcock introduced alloy steel wire for sutures and ligatures because of its non-irritating and ease-of-manipulation qualities. It can be used in any field of surgery and is especially useful where there is likely to be infection. Judging from the recent literature stainless steel is gaining wide popularity. It is especially favored by those surgeons who recommend early ambulation.

Interestingly enough modern investigations have confirmed Levert's work of 1829 and the earlier observations of Fabricius. Tissue reaction as seen under the microscope, varies with the kind of suture material. It is greatest with catgut, not so great with silk, much less with cotton and practically none with metals.

SOCIETIES

The Augusta County Medical Association

Held its regular quarterly meeting in Waynesboro on May 7th, under the presidency of Dr. G. Edmund Stone. The scientific program was as follows: Pernicious Anemia by Dr. Byrd S. Leavell, University, and Sympathectomy in Hypertension and Peripheral Vascular Disorders by Dr. Everett I. Evans, Richmond. Mr. Harry Northam, executive secretary of the Association of American Physicians and Surgeons, gave a report on the position of medicine in this world. Mr. Henry S. Johnson, director of public relations of the Medical Society of Virginia, discussed the relation of the physician to his patients.

Dr. Boyd H. Payne is secretary of this association.

Loudoun County Medical Society.

Officers of this Society are Dr. J. T. Jackson, Leesburg, who succeeded Dr. J. A. Gibson (deceased) as President; and Dr. A. C. Echols, Purcellville, secretary-treasurer.

Lynchburg Academy of Medicine.

The May meeting of the Academy was held at Lynchburg General Hospital on the 5th, at which time Dr. H. D. Hoskins spoke on "Indications for Broncho-Esophagology" and Mr. Francis Libby on "The Blue Cross and the Blue Seal Program". Dr. Joseph Edwin Warren was admitted to active membership.

Dr. F. Read Hopkins is president and Dr. Robert H. Cox secretary of the Academy.

Roanoke Academy of Medicine.

At the May meeting, held on the 7th, the following scientific program was presented: RH Factor by Dr. McLemore Birdsong, University of Virginia; and Diaphragmatic Hernia by Dr. Porter P. Vinson, Richmond.

The Smyth County Medical Society

Was reactivated on February 12, 1947, at a meeting at the Hotel Lincoln in Marion with fourteen members of twenty-six present. Dr. T. K. McKee of Saltville was elected president, Dr. J. R. Blalock of Marion vice-president and Dr. R. C. Potter, also of Marion, secretary-treasurer. There have been two subsequent meetings during the following months. Dr. Harry M. Hayter of Abingdon presented two interesting surgical cases of foreign bodies, one in the stomach and one in the descending colon, at the last meeting.

The May meeting was combined with the Southwestern Virginia Medical Society which met in Marion on May 1. Future meetings will be held monthly with programs by guest speakers or members of the Society.

Virginia Peninsula Academy of Medicine.

Prior to the meeting on April 21st, a cocktail party at the Hampton Country Club was given by Dr. Louis Richman and Dr. William A. Read, both of Newport News. A steak dinner was then served at the Veterans Hospital in Kecoughtan. At the scientific session Dr. Benjamin Baker, Baltimore, conducted a clinicopathological conference on three cases selected from the hospital records. There was an attendance of ninety-four, and among the guests was Dr. Cesar Velez, Director of Public Assistance, Guayaquil, Ecuador, South America, who is studying public health work in this country.

Dr. Robert H. Wright, Phoebus, is president, and Dr. Chester D. Bradley, Newport News, secretary-treasurer.

The Williamsburg-James City County Medical Society

Held their May meeting on Friday the 9th. Mr. Henry S. Johnson, Director of Public Relations and Medical Service of the State Society, attended and, following a brief talk, led a lively and profitable discussion. Proof that it was both interesting and stimulating was shown by the fact that the meeting ran a good hour over the usual adjournment time.

All regular members except two, and one dentist, were present at the meeting. Two doctors were elected to membership—Dr. Mark Williams who is associated with Dr. A. M. Sneed at Toano, and Dr. Raphael Mora, recently of Marlboro, N. J., who recently joined the staff of Eastern State Hospital in Williamsburg.

Plans were initiated for an outdoor picnic meeting in July.

Officers of this Society are Dr. J. R. Parker of Providence Forge president, and Dr. E. Beamer Maxwell of Williamsburg secretary.

Arlington County Medical Society.

At the meeting of this Society on April 17th, Dr. J. Ross Veal, Washington, D. C., spoke on "Peripheral Vascular Disease", and a case history was given by Dr. Anthony DiSario. At the May meeting on the 15th, Dr. Roy G. Klepser, also of Washington, gave a talk on "Bronchogenic Carcinoma".

Dr. C. P. Cake is president of this Society and Dr. Leo Solet, secretary-treasurer.

NEWS

Centennial Meeting, Medical Society of Virginia.

Plans are progressing well for the Centennial meeting of the Society to be held in Roanoke, October 13-15, under the presidency of Dr. W. L. Powell of that city. Among features planned is a birthday party on the first evening. The usual banquet, followed by dancing will be on the second evening, and special society luncheons and meetings on the 14th. Dr. Frank A. Farmer is general chairman.

Scientific and technical exhibits will be features of the meeting. All available space has been taken for the technical exhibits and scientific exhibits are now being arranged. Dr. W. A. McGee, chairman, requests that all doctors interested in presenting scientific exhibits communicate with him promptly at 1001 West Franklin Street, Richmond 20, as space for these is limited.

Dean of School of Medicine, Medical College of Virginia.

Dr. Harvey B. Haag, professor of Pharmacology at the College, has been named dean of the School of Medicine of the Medical College of Virginia, and will enter upon his new duties July 1, succeeding Dr. J. P. Gray who resigned last fall. Dr. Haag will also continue as professor of pharmacology.

Department of Health Change.

Effective May 1, Surry County was joined to Sussex, Prince George and Dinwiddie Counties, creating the Sussex-Prince George-Dinwiddie-Surry Health District with headquarters at Stony Creek, Virginia. Dr. Francis J. Clements is the Health Officer.

To Head Richmond Tuberculosis Work.

Dr. C. Howe Eller, Richmond City Health Director, has appointed Dr. Carl W. LaFratta as head of the Bureau of Tuberculosis Control and Director of Pine Camp Hospital, as of May 1. Upon the resignation of Dr. G. C. Godwin, who has left Virginia, the two offices were combined. In his new position, Dr. LaFratta will have charge of the city's entire tuberculosis program, including the clinic which will soon occupy its new quarters at 1001 East Clay Street. Dr. William S. Burton, recently one of the three resident physicians at Pine Camp, will be Dr. LaFratta's assistant.

Virginia Academy of Science.

At the meeting of the Academy in Charlottesville early in May, Dr. Sidney S. Negus, head of the department of Chemistry of the Medical College of Virginia, was named president-elect to take office in 1948. Dr. Jesse W. Beams of the University of Virginia was installed as president for the coming year. Dr. E. C. L. Miller of Richmond was re-elected secretary-treasurer.

"Bond-A-Month" Savings Plan.

The average doctor needs a "bullet-proof" investment, and the United States has provided it in Savings Bonds. We all know that, but just to make it available isn't enough. Most doctors need something more. In business matters they need a string tied around a finger. The Government is offering this to them in the new Bond-a-Month Plan. Your bank ties the string, gives it a yank every month. And all the doctor has to do is leave it there. As to planning his future, once the doctor has invested in Bond-a-Month, he *can* give all his attention to his important work.

The U. S. Department of Commerce has made studies of doctors' incomes, based on reports of a sample of the 129,000 men and women in private practice in 1940. The studies show that the income rises slowly to a maximum in the early 50's and then starts dropping. From 35 to 54 is the real money-making period.

At 35, most doctors have begun to pay off their starting-in-business debts, have built up a small neighborhood practice and are becoming known. Their practice grows with ability. By the time they are 54, other doctors, young and vigorous, have come

in with new methods, machines, theories. They make inroads into the established practice of the veteran. And somehow, without the doctor's really knowing why, the bank balance doesn't hold up the way it used to.

Bond-a-Month opens systematic saving through Government bonds to anyone with income and a checking account in a bank. Until now this was available only through Payroll Savings. It operates this way:

The depositor who wishes to buy a bond each month signs a card authorizing the bank to deduct the purchase price from his checking account. The bank issues the bonds and delivers them to the customer monthly. The periodic bank statement shows payment for the bonds.

And from the first and the only time the doctor signs his authorization card, he has nothing else to do except open the envelopes the bank sends him with the bonds inside.

Drs. Barnett and Buxton.

Dr. T. Neill Barnett of Richmond announces that Dr. Ernest P. Buxton, Jr., recently returned from Service, is again associated with him in the practice of Internal Medicine and Gastroenterology. Their offices are at 707 Medical Arts Building.

News from University of Virginia Department of Medicine.

Dr. Oscar Swineford, Jr., Professor of Practice of Medicine, addressed the Norfolk County Medical Society on April 21st, on the "Management of Asthma." He also took part in a symposium on "The Management of Hay Fever" at the Southwest Allergy Forum in Shreveport, Louisiana, on March 31st.

Dr. Fletcher D. Woodward, Professor of Otolaryngology, has recently returned from St. Louis where he served on the examining board of the American Board of Otolaryngology. He also attended the special society meetings there after the Board examinations

On May 12th. Dr. H. B. Mulholland, Professor of Practice of Medicine, spoke at the second annual meeting sponsored by the Public Health and Safety Committee of the Arlington Chamber of Commerce. His subject was "Virginia's Problem of Health and Medical Care."

Dr. Edward H. Williams,

Who was connected with the medical staff of Westbrook Sanatorium, Richmond, before entering the Service, has located in Miami, Florida, with offices in the Postal-Pacific Building, where he has resumed practice.

New Motion Picture Available.

"Folvite-Folic Acid in the Treatment of Anemia", a new motion picture, in 16 mm. sound and color with a running time of twenty minutes, is now available without charge to professional groups. Address your request to Film Library, Lederle Laboratories Division, American Cyanamid Company, 30 Rockefeller Plaza, New York 20, N. Y.

Spring Graduate Course of Gill Memorial Hospital.

At the twentieth annual spring graduate course of the Gill Memorial Eye, Ear and Throat Hospital, Roanoke, which was completed on April 12th, there was a registration of three hundred and fifty physicians and their wives. They came from nearly every state in the union, various parts of Canada, and from several foreign countries, including Honolulu, Scotland and Portugal. Honor guests were Dr. A. J. Ballantyne, Professor of Ophthalmology, Glasgow, Scotland, and Dr. Chester S. Keefer, Professor of Medicine, Boston Medical School, Boston, Massachusetts.

Married.

Dr. William Walker Butzner, Fredericksburg, and Miss Catherine Tob Beltzhoover, Charlestown, W. Va., May 10th. Dr. Butzner is a graduate in medicine of the University of Virginia.

Lt. (jg) Austin Ingram Dodson, Jr., MC., USNR., Richmond, and Miss Dorothy Carrol Stubblefield, Old Hickory, Tenn., May 24th. He is a graduate of the Medical College of Virginia in 1946, and has just completed an internship at Vanderbilt University Hospital.

The American Congress of Physical Medicine

Will hold its twenty-fifth annual scientific and clinical session September 2-6 inclusive, at the Hotel Radisson, Minneapolis. All sessions will be open to members of the medical profession in good standing with the American Medical Association. In addition to the scientific sessions, the annual in-

struction courses will be held September 2, 3, 4 and 5. These courses will be open to physicians and the therapists registered with the American Registry of Physical Therapy Technicians.

For information concerning the convention and the instruction course, address the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

Dr. Thomas F. Wheeldon,

Richmond, was elected Middle Atlantic regional vice-president of the Associated Harvard Clubs at the recent convention in Milwaukee.

Dr. Morgan B. Raiford,

Franklin, is now at the Graduate School of Medicine, University of Pennsylvania, where he has been with the Department of Ophthalmology since October 1946. He will begin the Spaeth residency in ophthalmology on June 1st and will act as assistant instructor in neuro-ophthalmology during the coming year.

The Virginia Obstetrical and Gynecological Society

Visited New York City on April 28 and 29 for its annual Travel Clinic. The day of April 28 was spent at the Sloane Hospital for Women at Columbia University, and the following day at the Woman's Hospital. Very interesting clinics were presented, and timely subjects were chosen for round table discussions. A dinner was held on the evening of April 28 for the twenty-seven members present and guests from the Staffs of the two hospitals visited. Dr. L. L. Shamburger, of Richmond, is president, and Dr. W. D. Suggs, of Richmond, is secretary.

Dr. Russell N. Snead,

Class of March '43, Medical College of Virginia, will locate for general practice at Columbia about July 1st. He has recently completed four years service in the United States Navy.

Dr. Edward M. Holmes, Jr.

Has become assistant health director of the Richmond Health Department, effective June 1st. He has recently been director of venereal disease control of the State Department of Health.

Virginia Society of Ophthalmology and Otolaryngology.

The twenty-eighth annual meeting of this Society was held at The Cavalier, Virginia Beach, May 10th, under the presidency of Dr. Thomas E. Hughes, Richmond. The following scientific program was presented: A Review of Advances in Ophthalmic Surgery During World War II by Dr. James N. Greear, Jr., Washington, D. C.; The Treatment of Nasal Sinus Conditions as Related to the Eye by Dr. Henry M. Goodyear, Cincinnati, Ohio; Contact Lenses—Motion Picture by Dr. A. A. Burke, Norfolk; Rhinosporidiosis of the Conjunctiva by Dr. Meade Edmunds, Petersburg, and Dr. Regena Beck, Richmond; The Use of Soluble Gauze in Otolaryngology by Drs. Fletcher Woodward and Thomas Holt, Charlottesville; Recent Developments in Intracapular Cataract Surgery Based on the Observation of 250 cases by Drs. E. G. Gill and G. H. Landers, Roanoke; Sinusitis by Dr. Richard O. Smith, Pulaski; Ocular Lesions in Metabolic Diseases by Dr. I. S. Tassman, Philadelphia; Ophthalmology Corneal Transplant, Norman S. Cutler Implant by Dr. Luther Brawner, Richmond; and Otolaryngology Arytenoidectomy for Bilateral Recurrent Nerve Paralysis by Dr. Woodward.

Dr. Fred E. Hamlin, Roanoke, was installed as president, and the following officers were elected: president-elect, Dr. Wallace Gill, Richmond; vice-president, Dr. Cuthbert Tunstall, Charlottesville; and secretary-treasurer, Dr. F. H. McGovern, Danville (re-elected). The 1948 meeting will be held in Winchester.

Nurses in VA Hospitals in Virginia

Will benefit by four major policy changes within the agency's medical service.

These changes, according to the Richmond branch office of VA, involve:

1. Creation of professional standards boards to evaluate the qualifications of nurses for appointment to nursing service, as physician boards now evaluate qualifications of doctors.

2. New regulations revising the promotion procedure for nurses in VA hospitals so more proficient nurses may be promoted to positions in line with their abilities.

3. Establishment of a rotation policy transferring nurses in isolated VA hospitals to hospitals with teaching units so they may keep abreast of the latest

professional techniques and modern nursing practices. Nurses become eligible for transfer rights after four years with VA.

4. A complete revision of nursing policies to increase the degree of nursing care given each veteran-patient.

Veterans Administration recently liberalized regulations for nurses regarding uniforms, so that now they may wear white uniforms and capes of their own choice. Previously nurses were required to wear regulation VA uniforms with black bands denoting rank.

News from Duke University, School of Medicine.

Dr. W. Henry Hollinshead, Professor of Anatomy, Duke University School of Medicine, has accepted the appointment of Professor of Anatomy, Mayo Foundation and Graduate School of Medicine, University of Minnesota, Rochester, Minnesota. In this position he will organize and head a Department of Anatomy which is being established by the Mayo Clinic and will continue his research upon the peripheral nervous system and mechanisms in the reflex control of respiration and blood pressure.

Dr. Hollinshead is one of the original staff of the Duke University School of Medicine, having been a member of the Department of Anatomy since 1930. He will assume his new duties July 1.

Doctors Needed in Rural Communities.

A number of inquiries have come to this office for doctors in rural communities. If interested in such, please communicate with this journal, 1200 East Clay Street, Richmond 19. *(Adv.)*

For Sale.

GE X-ray, Model 1775; 30 ma; 85 KVP, table with Bucky. In excellent working condition. James P. King, M.D., Radford, Va. *(Adv.)*

Wanted—

Assistant physicians for state mental hospital. Good salary. Full maintenance for single man. Brick cottage, telephone, water, lights, laundry for married. Replies confidential. Write Dr. Ira C. Long, Superintendent, State Hospital, Goldsboro, N. C. *(Adv.)*

Qualified Obstetrician,

Virginian, will consider proposal relative to association with an obstetrician or with a group. Replies treated confidentially. Address "Obstetrician", care this journal, 1200 East Clay Street, Richmond 19, *(Adv.)*

Wanted—

A young doctor for a junior partner; country practice; good salary plus commission. Address "Doctor", care this journal, 1200 East Clay Street, Richmond 19. *(Adv.)*

Wanted.

Laboratory Technician for small clinic in small town in southside Virginia. Salary attractive. Write or call Dr. K. S. Freeman, Kenbridge, Virginia. *(Adv.)*

OBITUARIES

Dr. Henry Rolfe DuPuy,

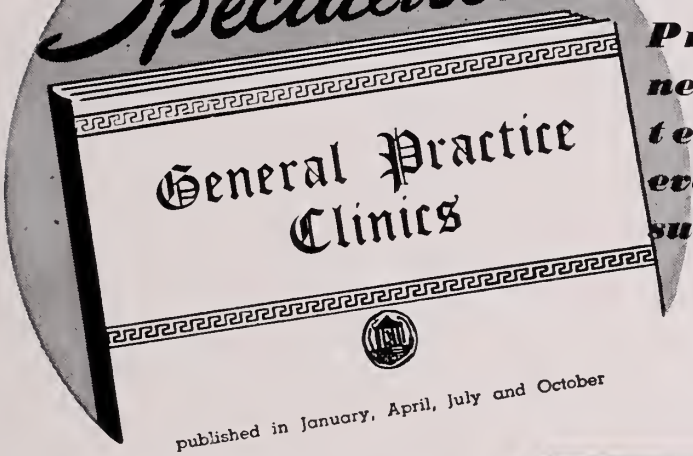
Winchester, died May 3rd. He was forty years of age and a graduate of the Department of Medicine, University of Virginia, in 1932. Dr. DuPuy practiced for sometime in Martinsburg, West Virginia, before locating in Winchester. He had been a member of the Medical Society of Virginia for several years. His wife and two daughters survive him.

Dr. Otis Hillsman Whitlock,

Richmond, was burned to death in his home on May 9th. He was a native of Powhatan County and sixty years of age. Dr. Whitlock graduated from the former University College of Medicine, Richmond, in 1911. He practiced for sometime in Powhatan County before coming to Richmond. He had been a member of the Medical Society of Virginia for thirty-six years. His wife and a son survive him.

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Medical Society of Virginia
Roanoke, October 13-15, 1947
Annual Meeting

July 1947

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Virginia Medical Monthly

Vol. 74, No. 7.
WHOLE No. 1141.

RICHMOND, VA., JULY, 1947

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THE COSEASONAL TREATMENT OF HAY FEVER*

JOHN L. GUERRANT, M.D.,
and
OSCAR SWINEFORD, JR., M.D.,
University of Virginia,
Charlottesville.

Every year a number of hay fever patients are surprised to learn that something specific can be done to give them prompt relief from their symptoms. The following is an example:

On the 13th of September, 1944, a 37 year old lawyer appeared. He had had hay fever in August and September for five years. His symptoms were present only during the ragweed season. He knew of nothing except pollen that would produce them. His general health was excellent. Examination showed nothing of importance except the signs of severe hay fever. Skin tests showed many positive reactions to foods, dusts, and other inhalants and very strong reactions to ragweed, cocklebur, goldenrod and corn pollens. He was started on daily 0.1 cc. subcutaneous injections of 1:50,000 ragweed, cocklebur, and goldenrod pollen extracts. He had a local reaction to the second dose. The third dose was 0.1 cc. of 1:1,000,000 dilution of the same extracts. It was followed by prompt relief. He remained comfortable throughout the remainder of the season while taking 0.1 cc. doses of dilute pollen extracts every three or four days. Toward the end of the season it was decided to start perennial treatment so the concentration was slowly increased until he received 0.1 cc. of a 1:5,000 dilution about October 1st. No drugs were given for symptomatic relief.

*From the Allergy Clinic, Department of Internal Medicine, University of Virginia Medical School, Charlottesville.

Read at the meeting of the Medical Society of Virginia at Virginia Beach, October 14-16, 1946.

This is called coseasonal treatment. It was described by Vaughan first in 1923[1] and again in more detail in 1932.[2] He pointed out that the doses should be small, that they should not be increased in size, that the size of the first dose should vary indirectly with the strength of the skin reaction, and that once relief had been obtained the interval between doses should be increased as much as freedom from symptoms would permit.

Several modifications of Vaughan's original plan have been suggested. These include the administration of the extract intradermally so as to produce a local reaction in the form of a large wheal;[3,4,5,6] elimination of contributing factors such as foods, dusts, fungi, or other inhalants;[7,8] and the inclusion of extracts of dusts and other inhalants in the treatment mixture.[9,10]

Coseasonal treatment is regularly used at the University of Virginia Allergy Clinic on all patients who first appear with active seasonal hay fever. Most of them are first given a comprehensive allergic study. A detailed allergy history is obtained. Emphasis is placed on the dates of onset and termination of seasonal symptoms; the presence of asthma and other allergic diseases; perennial symptoms, even if they are minor; aggravation of symptoms by foods, dusts, feathers, fly sprays, animal danders, and other inhalants; presence of sinus and bronchial infections; a family history of allergic disease; and environmental factors that might be important. General medical histories and physical examinations, as well as miniature films of the chest, are done rou-

tinely. Special attention is given the nasal mucous membranes, nasal septum, and transillumination of the sinuses. Sinus x-rays are made when indicated.

Skin tests are done for the pollens prevalent at the time of the symptoms and for about 100 common foods, dusts, epidermals, fungi, and other inhalants. Preliminary scratch tests are routinely followed by intradermal tests with all extracts giving negative scratch reactions. All tests are done on every patient at one sitting. Conjunctival tests are done for the pollens suggested by the history when skin tests are negative.

An incomplete examination has to be done occasionally on patients who come in with severe symptoms demanding immediate attention. This includes at least a brief history, examination of the nose and sinuses, and skin tests for the suspected pollens. Some of these patients have to have a program based on the detailed study before their symptoms are relieved.

A treatment program is designed for each patient on the basis of the information obtained from the examination. The case presented is an example of a simple problem. Pollen seemed to be the sole source of his symptoms and treatment was limited to the use of pollen extract. If the evidence indicates that other factors such as foods, dusts, epidermals, fungi, polyps and sinus or bronchial infection contribute to the symptoms an effort is made to eliminate them.

Management is based on three forms of treatment. They are: (1) Injections of extracts of pollen and other inhalants; (2) Avoidance of foods and inhalants, and treatment of infection; (3) Use of drugs.

The proper use of pollen extract is the most important factor in the coseasonal treatment of hay fever. A mixture of pollen extracts is made up individually for each patient. All pollens producing skin or conjunctival reactions are included if they are known causes of hay fever and are prevalent at the time of the patient's symptoms. Skin reactions to pollens that are not in the air at the time of the patient's symptoms are ignored. Pollen calendars show which pollens are prevalent at any season. In doubtful cases the examination of slides exposed to the patient's environment may identify the offending pollen.

When the history points definitely to other inhalants and is supported by positive skin reactions, an extract of the appropriate inhalants may be included in the treatment mixture.

There are no fixed dosage rules. The extracts are given subcutaneously. The initial dose is usually 0.05 cc. or 0.1 cc. of a 1:50,000 dilution. If the skin reactions are exceptionally strong, the first dose is 0.1 cc. of the 1:250,000 or 1:500,000 dilution. If the skin reactions are very weak, the first dose may be 0.1 cc. of the 1:10,000 dilution. A good rule is to start with 0.1 cc. of that dilution which gives a weakly positive intradermal test. The extract is usually given daily and the dose is increased rapidly until the symptoms are relieved or until a local reaction is produced. If an appreciable local reaction follows the first injections or if symptoms seem to be aggravated by them, the dose is reduced by one-half or more daily until there is no local reaction or until the symptoms are relieved. If relief lasts less than 24 hours, the injections may be given twice daily. Once the patient becomes comfortable the dose is repeated every two or three days or as often as needed to control the recurrence of symptoms. If perennial treatment is to be used, the dose is gradually increased, reactions and exacerbations permitting, during the season.

When the history suggests that foods or inhalants other than pollen may cause perennial symptoms or aggravate the seasonal symptoms they should be eliminated from the diet and the environment for trial periods. Detailed written instructions for avoiding food and inhalants are given. Positive skin reactions to these extra-pollen factors do not require special consideration unless supported by the history or by failure to obtain prompt relief from pollen extract injections.

If sinus or bronchial infection is present it is treated actively. If polyps are found in the nose they are removed promptly.

Drugs are used to supplement specific pollen extract treatment of seasonal hay fever. They have no curative value. They may give almost complete relief to an occasional patient with mild symptoms and they usually lessen severe symptoms. They are frequently disappointing. The following drugs are often used: Ephedrine by mouth, alone or in combination with one of the barbiturates or xanthines. The capsules containing ⅜ gr. of ephedrine with ¾ gr. seconal, nembutal, or amytal are popular. Elixir of neosynephrin is often well tolerated by children. Ephedrine or neosynephrin are effective

as nose sprays. Subcutaneous injections of adrenalin give temporary relief. A number of other drugs such as propadrine, racephedrine, benzyl-ephedrine and the benzedrine inhaler are sometimes helpful when others are poorly tolerated. When asthma is present potassium iodide, ephedrine, caffeine, or aminophyllin alone or in combination are often helpful. Aminophyllin or glucophyllin may be given by suppository.

Benadryl and pyribenzamine have been available this year for the first time. Twenty-five to 50 mg. of either, three to six times daily, often give marked and prompt relief from hay fever. They relieve asthma less frequently. They cause troublesome drowsiness in many patients and nervousness or nausea in a few. In spite of wide publicity they are far from the answer to the problems of hay fever. They are apt to have little effect if the symptoms are severe.

Toward the end of the pollen season a form of treatment for the following year is chosen. A program leading to maximum relief with minimal annoyance to the patient is desirable. Perennial treatment is advised for those who have severe symptoms, especially if more than eight or ten injections are needed to obtain relief from coseasonal treatment. When prompt and satisfactory relief follows a few coseasonal injections the patient is advised to return the following year at the onset of his symptoms. The following is an example of a patient who has done especially well for several years on coseasonal treatment.

A 42 year old housewife was seen first in May, 1941. She had had hay fever in April and May for nine years. She was free of symptoms for the rest of the year. She became comfortable after three injections of grass and plantain extract. Since then she has obtained prompt relief each April or May from two or three injections of the same extract.

One hundred cases of hay fever treated by this coseasonal program were studied. The only criteria for selection were that the records have notes complete enough to indicate the degree of relief and that treatment had been given at least a week. In analyzing the cases emphasis was placed on the results of treatment, the incidence of several complications of seasonal hay fever, and the effects of these complications on the results.

The results are classified as satisfactory or unsatisfactory. Patients who showed clear-cut relief and were able to go about their ordinary activities with only occasional mild, nose or chest symptoms were considered satisfactory. All others were unsatisfactory. Many had complete relief. Most of those who became comfortable did so by the fifth day of treatment. Many were comfortable by the second day.

The table shows the results of coseasonal treatment of 100 cases together with the incidence and

RESULTS OF TREATMENT AND INFLUENCE OF VARIOUS ASSOCIATED CONDITIONS IN 100 CASES OF HAY FEVER TREATED COSEASONALLY

	Number	%with satisfactory results
Total Cases	100	87
*Uncomplicated Cases	28	96
Cases with:		
Asthma	37	83
Perennial Symptoms	45	82
Infection	34	82
*Skin reactions to allergens other than pollen	73	89
Nasal Obstruction	32	84

lack of effect of a number of associated conditions. Eighty-seven of the 100 patients experienced satisfactory relief. The degree of relief obtained in patients with asthma, perennial hay fever, sinus or pharyngeal infection, nasal obstruction, or skin reactions to things other than pollen equaled that of the entire group. There were twenty-eight patients without complication. In only one of these was the result unsatisfactory. The effects of strong and weak skin reactions; spring, summer, and fall symptoms; sex; years of symptoms; and age of patient were also studied. These are not included in the table because they did not seem to influence the results.

The good results obtained in the presence of sinus infection, nasal polyps, perennial symptoms, and sensitivity to factors other than pollens are assumed to be due to the recognition and treatment of these conditions.[7,8,9,10] Proof of this assumption was not attempted.

The records of the thirteen cases in whom the results were unsatisfactory were studied carefully. The unsatisfactory results may have been due to: Untreated perennial symptoms in five; A period of symptoms that began before and extended beyond the pollen season in two; Severe local reactions followed by exacerbations of the symptoms in one; Discontinuance of injections after one week in spite

*For this tabulation, skin reactions to allergens other than pollen were not considred as complications.

of apparent improvement in one; Irregular injections in one; Return of symptoms after exposure to a large amount of dust in one who had already been relieved. In two the poor results could not be explained.

CONCLUSIONS

1. Coseasonal treatment relieved eighty-seven of 100 cases of seasonal hay fever satisfactorily.
2. An individual treatment program was designed for each patient after the appropriate studies had been completed.
3. Treatment consisted of:
   A. Frequent small doses of appropriate pollen extracts supplemented with other allergens when indicated.
   B. Elimination of all foods and inhalants suspected of causing symptoms.
   C. Use of drugs for symptomatic relief.
4. Good results may be obtained in spite of complications if they are recognized and treated.
5. Good results are usually apparent by the fifth day of treatment.
6. Perennial treatment is recommended for subsequent years unless coseasonal treatment gives prompt relief with a few injections.

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DISCUSSION

DR. J. WARRICK THOMAS, Richmond: It is a pleasure to have the opportunity of discussing this paper on the coseasonal pollen treatment of hay fever. I feel it is a very apt time, as the hay-fever season is just over and we still appreciate the fact that many of these individuals are quite miserable and that if we can help them with the coseasonal pollen treatment we are doing something that is worth while.

The type of treatment as employed at the University is similar to that employed elsewhere. The dilutions vary. We employ a more concentrated extract, but in most instances they start with a dilute extract of one to 50,000 and work up; and we start with dilutions of one to 10,000, one to 5,000, and on to 3,000 and work up. We strive for the same purpose—to attain that amount which controls the patient's symptoms.

I took a number of observations of our patients during the current season. Incidentally, the symptoms do vary in the same individual from one season to another. There seems to be a variation in the toxicity of the pollen, and one season you can use a different schedule of dosage from another season to control the patient's symptoms. We find in some individuals the symptoms are adequately controlled with one to two injections. In other instances a larger number of injections is required. We studied a group in which the number of injections varied from one to eleven, to control the coseasonal symptoms, and the period of relief varied from twenty-four hours to five days.

We have found that the coseasonal treatment and any and all treatment at times are not adequate to control certain individuals. I had the experience this summer of encountering a patient who has been under treatment since 1922, having been under treatment by competent men at the University of Chicago and elsewhere. He has had varied treatment and has followed his diet, with no result. So we decided to try some of the wonder drug, as the current magazines prescribe, although we do not usually follow their recommendations. We gave this man pyribenzamine, and it was the first time in twenty-two years that he had been able to tolerate the current pollen season with a fair amount of relief. While I am speaking of pyribenzamine and benadryl, I want to utter a word of caution. There have been some cases in which asthmatics were made definitely worse. One pediatrician discussed with me one child who had a dose of ten milligrams, which was the correct dosage for that child, and he slept for twelve hours straight.

One other point I think should be emphasized. That is, in addition to giving the patient coseasonal pollen treatment we should carefully watch his diet. There are individuals who receive coseasonal pollen treatment with absolutely no relief; and, after controlling their diet and eliminating those foods that may be only seasonal offenders, we are able to control their symptoms. I feel

we should also state that there are patients who may have been treated preseasonally or perennially, and they still have hay fever during the season. In that case it is necessary to bring in our coseasonal treatment in addition to the other treatments, and we find that coseasonal treatment in these instances gives very happy results in selected cases.

We encounter pregnant women sometimes who have to have their hay fever taken care of, too. One of these individuals, under the coseasonal treatment, got along satisfactorily. Another individual had quite severe symptoms. This patient was having considerable hay fever and was quite uncomfortable. She had a couple of shots, with no results. She was about at term. With the permission of her obstetrician her symptoms were nicely controlled by pyribenzamine.

When we treat allergic individuals we encounter those people who are markedly sensitive and have severe constitutional reactions. When you vary your coseasonal treatments or other treatments as much as 0.05 c.c. dosage of a solution which they tolerate, and they go into severe reaction, we must be prepared to control the present emergency. Therefore we like to give all the pollen injections in the arm or in the leg sufficiently low to permit the use of a tourniquet proximal to the injection; and we must always have available adrenalin, so that we can be prepared for such an emergency. At times patients may go into profound shock, and we should have caffein and other stimulants available.

It is a pleasure to have had Dr. Guerrant discuss this subject.

DR. GUERRANT, closing the discussion: I would like to thank Dr. Thomas for his remarks.

We believe the smaller doses of extract are important because many of our patients are sent home with a supply of extract to be administered by their local doctors. Even though the smaller doses may delay response to treatment, the added safety makes them worthwhile.

Orthopaedic Training Program at Duke University School of Medicine.

On May 24 and 25 meetings were held at Charlotte Memorial Hospital, Charlotte, and the North Carolina Orthopaedic Hospital, Gastonia, at which trainees in the Orthopaedic Training Program at Duke University School of Medicine and other hospitals read medical papers to members of the orthopaedic specialty and the personnel of the training program.

This training program in orthopaedic surgery has been established with the cooperation of the Warm Springs Foundation, Warm Springs, Ga., the North Carolina Orthopaedic Hospital, the Shriner's Hospital for Crippled Children, Greenville, S. C., Charlotte Memorial Hospital, and the orthopaedic division of the department of surgery at Duke. The training is on a competitive basis and all appointments are for one year. Fellowships are provided by the National Foundation for Infantile Paralysis. Engaged in the training are six first year fellows, four second year fellows, four third year fellows, four fourth year resident fellows and one fifth year resident fellow.

The personnel of the services participating in this program include: Dr. Robert L. Bennett, director of physical medicine, Warm Springs Foundation, Dr. Charles E. Irwin, Warm Springs; Dr. Oscar Miller and Dr. Julian E. Jacobs and associates, Charlotte Memorial Hospital; Dr. William M. Roberts and associates, North Carolina Orthopaedic Hospital; Dr. J. Warren White and associates, Shriner's Hospital, and Dr. Lenox D. Baker and Dr. Beverly Raney, Duke University School of Medicine.

A. M. A. Membership Hits Peak.

The American Medical Association has 131,590 members and 72,243 Fellows as of March 1, 1947. To qualify as a Fellow, a doctor must be a member in good standing of the A. M. A., graduate of a recognized medical school, pay Fellowship dues and subscribe for *The Journal*. Formal application must be made to the Judicial Council for approval. Only those members who qualify as Fellows are eligible for election as officers, may serve as members of the House of Delegates, may register at the annual sessions of the Association or may participate in the work of its scientific sections.

THE PRESENT STATUS OF SHOCK THERAPY*

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and
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In the past twenty years, psychiatry has made excellent strides. More has been accomplished in this time than in the hundred years previous. In the last five to ten years, physicians and medical students have learned to recognize psychiatric problems early. Medical students are now learning a more sympathetic approach and patients themselves are learning to seek psychiatric treatment for mental disorders before the illness reaches a malignant stage. The so-called "shock therapies" have now become established as valuable aids in psychiatric treatment. Chief among these are pharmacological shock, insulin shock, insulin sub-shock brief stimulus and electro-shock. In addition to these, the operation known as prefrontal lobotomy, or, as preferred by some, prefrontal leucotomy, has become an established procedure in certain types of cases.

At present, the three principal types of so-called shock therapy are insulin hypoglycemia, first introduced by Sakel in 1928, metrazol convulsive therapy advocated by Von Meduna in 1934, and electro-shock convulsive therapy proposed by Cerletti and Bini in 1938. Recently, a new type of electric shock machine has been developed, known as the brief stimulus apparatus. It is said to be safer and to cause less after effects (no memory defect, less apprehension) than the machine now in general use. It is simply an improvement and modification of the standard machine.

A group of California workers are now experimenting with "electric narcosis", where so-called electric sleep is induced. This is still in the experimental stage.

Various combinations of the above methods are used and other drugs have been tried by research groups. Electro-shock therapy, either alone or combined with insulin sub-shock therapy is rapidly becoming the procedure of choice. It is the least complicated, patients apparently have less anxiety and apprehension for this type of treatment and very often there is amnesia for the treatment itself.

*Read before the annual meeting of the Medical Society of Virginia, at Virginia Beach, October 14-16, 1946.

The obvious clinical effect of this type of therapy is the production of a brief period of unconsciousness. What actually happens in terms of physiology and psychology has not been demonstrated adequately.

The many theories fall into two groups, the organic and the psychological. On the organic side, there are many who believe that the results are due to cerebral anoxæmia. Another large group insists that the basis for the results lies in the effect on the vegetative nervous system. On the psychological side, the simplest theory is that the release of inner tension and the transformations that occur during the period of amnesia are dominant factors in producing improvement.

Obviously the details of the technique have no place in this paper. However, we will mention briefly the general procedure. In electro-shock, we use from 350-700 milliamperes of current for one-tenth to five-tenths of a second, at a voltage of seventy to one hundred and thirty volts.

In metrazol therapy from 2 to 5 cc. of a 10 per cent aqueous solution of metrazol is injected intravenously rather rapidly. If a seizure does not follow, the metrazol is repeated twice, if necessary, with an increase in dosage of 1 cc. each time. As mentioned, there are two methods of insulin therapy; either insulin shock or coma is produced, or the insulin reaction is terminated in the pre-coma stage, and called sub-shock. In either case, the patient is started with 15-30 units of insulin the first day and the dosage increased ten to fifteen units a day until the desired reaction is obtained. The dosage is then held at that level until maximum improvement or, if improvement does not result, until the patient has received thirty to fifty treatments. Electro-shock treatments are usually given three times a week, but in certain types of cases daily treatments for a few days are necessary.

We have learned that electric shock treatment, given more frequently than we formerly gave it, will often quiet a very disturbed patient in a few days. In fact, we are giving what we describe as a "double barrel" treatment, in which one electric shock is

followed by another even before the patient regains consciousness. In some instances we are giving two a day and we are frequently giving a treatment on successive days for four or five times. It is seldom that patients, no matter how violent and disturbed, cannot be kept quiet and held down by this treatment. The confusion has been considerable but this has always cleared up and no damage has been noticed.

There are certain cases, particularly elderly people, who respond promptly to electric shock therapy then after a few months have a return of symptoms, and again respond promptly when treatment is reinstituted. We usually give this type of case one electric shock treatment a week for a period of several months, hoping that a recurrence of symptoms will be avoided.

We do not advocate this form of therapy for every mental illness, but it has certainly proved effective in a variety of mental disorders. Practically all therapists agree that in the affective disorders where the chief disturbance is in the emotional field, electro-shock therapy is indicated. That in most all types of depressions, the period of depression is definitely shortened is generally admitted. Particularly is this true of involutional melancholia. In other types of involutional psychoses, such as the paranoid type, though the delusional content sometimes remains after treatment, the tension is usually relieved. We have, however, had several paranoid types of involutional psychoses in which the patients lost their delusional content entirely following electro-shock treatment.

In the manic depressive psychoses, both the manic type and the depressed type, improvement usually results early. In schizophrenia, the relative value of electro-shock therapy as compared with insulin therapy is debatable. In our series we find that many cases of early schizophrenia are improved with electro-shock therapy, and in many of the catatonic type remission of symptoms is brought about more rapidly with electro-shock treatment. In more advanced schizophrenias, we prefer the combination of electro-shock therapy with sub-shock insulin therapy. There are some who take the stand that electro-shock therapy has no place in the treatment of the psychoneurotic. We have found that in some obsessive-compulsive states, electro-shock has been of distinctive value, and certainly in the psychoneurotic type of reactive depressions the period of depression is shortened. We believe, too, that sub-shock insulin therapy has a definite place in the treatment of the psychoneurotic, particularly in relieving the tension and rendering the patient more amenable to psychotherapy. In all types of mental disorders, but particularly in the psychoneuroses, very careful selection of cases is essential.

When it comes to the selection of cases, the question of contraindications arises. We do not believe that there are many absolute contraindications to electro-shock treatment. Certainly active pulmonary tuberculosis, certain types of bone disease, very severe myocardial disease, malignancies and severe organic brain disease do contraindicate the use of this type of therapy. However, arterial hypertension, moderate arteriosclerosis and even some myocardial damage are not absolute contraindications. Each patient must be considered individually and the advantages to be gained compared with the additional risk. For example, suppose we have an agitated depression in an individual who has some myocardial damage. Is the load on the heart greater when he has an electro-shock treatment, or when he is walking the floor constantly, moaning and groaning, refusing to eat, resisting all medication, and requiring tube feedings or sedation and intravenous therapy? Or suppose we have a disturbed manic type of manic depressive psychosis who is extremely over-active and has some arterial hypertension; which increases his blood pressure more, electric shock treatment or his excitement and violent behavior? By the judicious use of sedatives before the treatments we have been able to considerably lessen the amount of rise in blood pressure which usually occurs during an electro-shock treatment.

There are certain individuals who are so fearful and apprehensive of the procedure that it is necessary to amytalize them, which is a drawback to the procedure because it makes them more tolerant to electricity and a greater volume of electricity is needed to produce the desired effect. We are now using hyoscine before treatment hoping that this will allay the apprehension and we are of the opinion that it does help. Coramine was used intravenously after shock to reduce the period of confusion and get the patient alert and awake more quickly but we are not enthusiastic about our results. Curare was used at one time on all patients. We stopped it for a time but had many more cases of spinal

compression. We are now beginning to use it on all cases under fifty years of age.

Brains from experimental animals treated with doses of electricity comparable to those used clinically have failed to disclose any significant changes in the central nervous system. In the human, normal brains (from the neuropathological standpoint) are rare and hardly ever found in bodies dead from the usual diseases. Hence, the difficulty in evaluating changes in the brain of those who have had insulin or electro-shock. We have successfully given electro-shock treatment to disturbed paretics and to some patients who previously have had prefrontal lobotomies.

The most likely complications of a physical nature to the procedure are cardiac failure, circulatory collapse, cerebral vascular accidents and various fractures and dislocations. By proper selection of patients and careful study before treatment is instituted, both clinical and electrocardiographic, these complications are kept at a minimum. When respiratory difficulty is met, prostigmine and coramine are used. Fractures of long bones have been reported in literature, but in our series of cases there have been none. Fractures of the pelvis, particularly of the acetabulum have been reported, all occurring in aged patients. We had one such fracture, which was in a seventy-six year old patient. Compression fractures of spinal vertebrae are the most common complications. These fractures usually result in no disability and many are discovered only on x-ray examination; some of them cause pain and discomfort for a few days and, with conservative treatment only, soon become asymptomatic. In over ten thousand treatments, we have had only about thirty-five such fractures. In treating the first two or three we used plaster casts, but it was soon learned that the conservative treatment with no cast or brace resulted in symptomatic improvement much sooner.

We are always aware of the potential risk of fatal accidents, but actual fatalities from electro-shock treatment are extremely rare. Kalinowsky reported more than 2,000 cases without a fatality. We have had one fatality, and autopsy showed fatty degeneration of the heart, particularly in the right ventricle. Grossly, the brain showed a cystic enlargement of the fifth ventricle. Microscopic studies were not significant.

SUMMARY

In summary, the thousand cases treated with electro-shock treatment and the six hundred treated with insulin therapy represent a cross section of the types in which we have found convulsive therapies to be valuable. By careful selection of cases and thorough physical survey before treatment is instituted, complications are kept at a minimum. Many conditions previously considered contraindications to electro-shock treatment, such as moderate arterial hypertension and some myocardial damage, are not now so considered. Always the danger must be weighed against the probable benefit. With the development of the new brief stimulus machine, unpleasant effects, such as post shock memory impairment and confusion, are diminished. Electro-shock treatment, combined with insulin therapy, insulin shock therapy, and insulin sub-shock therapy, all have a definite and established place in the treatment of the psychoses and psychoneuroses, but are not to be considered substitutes for good sound practical psychotherapy.

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Professional Building.

DISCUSSION

DR. JOSEPH E. BARRETT, Williamsburg: I am very pleased to have this opportunity to discuss Dr. Neale's paper, and I should like to make a few side remarks before commenting on its contents. I should like to express my personal appreciation to the Program Committee of this Society for including three very important papers on mental disorders in its program and also to our President for his very pertinent remarks in his address last night in regard to the whole problem of mental disorder. I know of no other condition in which you, as general practitioners, show less interest in your patients than after they have been committed to a mental hospital. It is very rarely that we have inquiries from you as physicians regarding your patients whom you have sent there. I frequently try to get physicians to go with me through some of the hospitals, and they comment that they are a little bit afraid that they might not get out. I am frank to say that sometimes I am fearful, and the only thing that gives me great confidence is that I carry the keys.

Shock treatment is, as Dr. Neale has said, a well established therapeutic measure in the treatment of mental disorders. I think the term "shock treatment" is somewhat of a misnomer. It grew out of Dr. Sakel's investigations in connection with the treatment of drug addicts, in which he used insulin and put them into a state of insulin shock. He observed that in those cases that went into deep shock the drug addicts very rarely showed, on withdrawal, mental symptoms. From that the treatment of mental disorders came. Then Dr. Von Meduna observed that epileptics very rarely show symptoms of schizophrenia or dementia praecox, and he began to use the convulsive seizure in the treatment of dementia praecox. He began search for some drug to produce the seizure and, of course, used camphor. From that we derived the use of metrazol, which is a camphor derivative. So, when we speak of shock treatment, what we really mean is the use of the convulsive seizure in the treatment of mental disorders.

Since the use of metrazol a simpler method has been developed, which is the use of electric stimulus. All it does that we know of is produce the convulsive seizure. Some of us have tried to produce subconvulsive reactions, to see if we got the mental improvement; but I think it is generally conceded that in the great majority of those with mental disorders the subconvulsive stimulus does not produce the results that the convulsive stimulus produces. Why, I do not know, and I do not think anyone knows. I think of all of us would agree that to produce a convulsive seizure is contrary to the economy of the human being, but we do know that as a matter of practice it produces very satisfactory results in certain types of mental disorders; and it has produced results in such a favorable degree that it has become a fixed procedure, I believe, in the treatment of mental disorders. By comparison, we might say that before the use of convulsive procedures we could fairly well predict that fifteen per cent of cases of dementia praecox would show a spontaneous remission under the use of the expectant type of treatment, hydrotherapy, psychotherapy, occupational therapy, and so on. We continue to use those therapies in connection with convulsive shock.

At the Eastern State Hospital, in the last few years, we have treated a total of 673 cases with convulsive-shock treatment. We have given an average of six stimuli per patient, making a total of 4,038. In that group we have had no fatalities and have had no serious accidents. We have had a few compression fractures of the vertebrae, but we have not considered those serious. Indeed, a few years ago Funkhouser and Barrett, in a study published in the *Journal of the American Psychiatric Association,* showed that the number of compression fractures occurring in shock-treated cases was no greater than those observed in epileptics.

We have a recovery rate of around thirty-five per cent. I think that is a sufficient improvement to warrant our continuing the use of electric stimuli or convulsive seizures in our cases of dementia praecox, and our results are not anything like as favorable in that group of cases as in some of the others. For instance, in our cases of manic-depressive psychosis we have a recovery rate of ninety per cent, and in our cases of involutional melancholia we have a recovery rate of seventy-eight per cent. There are clinics that quote higher rates, but these rates of recovery in our clinics are for one year after treatment.

We have not used curare or intercostin in our efforts to reduce the magnitude of the seizure or the pull of the muscles on the vertebrae, and I think Dr. Neale's figures demonstrate the futility of the use of that drug. It is added complication to your patient in treatment.

We have discontinued the use of metrazol. We continue the use of electric stimulus and insulin. We have discontinued the use of metrazol for the reason that there is an interval between the injection of metrazol and the seizure in which the patient undergoes a period of tremendous fear. He has a feeling of something dangerous impending, so we have discontinued the use of that drug.

It is a big problem, but I believe the convulsive treatment of mental disorders is a therapeutic measure that has come to stay. There is a great deal to be found out about it. As Dr. Neale said, we do not know how it produces its benefits. There are numerous theories. The one gaining most support is that there is some sort of electro-physico-chemical change in the brain cells brought about by the treatment, which causes the improvement.

PENICILLIN IN THE TREATMENT OF LUNG ABSCESS IN INFANTS AND CHILDREN*

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Until recently lung abscess in infants and children has been considered of rare occurrence. However, review of the literature indicates that it is not infrequent. D'Ingianni[1] reported 417 cases including 64 infants and children. Graham[2] reported an incidence of 18.3 per cent in infants and children. In Valle's[3] series 10.2 per cent occurred in children.

The diagnosis is more apt to be overlooked in children because of the lack of expectoration of the characteristic foul sputum. The more general use of the x-ray in diagnosis has been an important factor in the increase in number of cases reported. An x-ray examination should be made in all cases of respiratory infection with suggestion of localized pathology.

The treatment of lung abscess in all age groups has been far from satisfactory but the results obtained in infants and children have been even more disappointing. For example, in D'Ingianni's[1] series of 64 cases, one patient recovered, 24 were improved, 13 were unimproved, and 26 died.

Smyth and Billingslea[4] recently reported four adult cases treated with penicillin, with recovery. They were able to collect 29 additional cases reported up to that time. Among these there were two infants, one 2½ months and one 8 months of age. Both had cystic fibrosis of the pancreas. Both died of recurrence of the abscess after satisfactory response initially. We have been unable to find any additional cases in infants and children reported in the American literature up to this time.

While the results obtained with penicillin are still poor, there appears to be a definite increase in cures over previous methods of treatment.

The universally poor results in infants and children warrant a discussion at this time. We have had the opportunity to treat only three cases and realize that no conclusions can be drawn, but report these cases with the hope that all cases treated will be reported, thus enabling a review of the efficacy of penicillin.

*Read before the annual meeting of the Medical Society of Virginia, at Virginia Beach, October 14-16, 1946.

ETIOLOGY

The causative organism must enter the lung either by way of a penetrating wound, the lymphatics, the blood stream or by aspiration through the air passages. The most common causes are:

(1) Operation on the oropharynx
(2) Pulmonary inflammations
(3) Abdominal operations
(4) Neoplasms of lung, bronchi, esophagus and mediastinum
(5) Trauma
(6) Foreign body
(7) Septicemia

There are probably fewer cases due to tonsillectomy than previously supposed. Smith[5] groups abscess as: (1) Bacterial (2) Fuso spirochœtal (3) Mycotic. He believes that staphylococci account for 75 per cent of all bacterial abscesses and 50 per cent of all abscesses in children.

The diagnosis of lung abscess should be suspected in any case of pulmonary infection with a history of recent operation under general anesthesia, particularly when the operation involved the nose and throat, history of unconsciousness or convulsions, aspiration of a foreign body or pulmonary infection persisting for more than two weeks. The possibility of lung abscess as the underlying cause should be considered in all cases of empyema.

The physical findings are apt to be indefinite. Impaired resonance, moist rales and wheezes may be present. Small centrally located infections may present no abnormal findings on physical examination. Persistent temperature elevation and cough will point to chest pathology. The x-ray may not show abscess cavity either, due to the fact that the process is very early, the cavity is filled or films were not taken in the proper position. All suspected cases should have upright postero-anterior and lateral films. Oblique films are often helpful. Serial films are necessary for accurate diagnosis and treatment. Early diagnosis and prompt institution of treatment will favorably affect the prognosis.

Tuberculosis, interlobar empyema, bronchiectasis,

infected lung cysts and foreign body must be considered in the differential diagnosis.

TREATMENT

Bed rest, postural drainage and penicillin in adequate dosage by the intramuscular route should be begun as soon as the condition is suspected. Attention should be given to diet, with an adequate supply of proteins, calories and vitamins. Blood transfusions are frequently necessary.



Fig. 1. Case 1. Admission film showing pneumothorax, adhesion to the lateral chest wall, slight pleural fluid, and appearance of cavity in the upper lobe.

In carrying out postural drainage, the infant's hospital bed can be used to advantage. It is necessary to localize the lesion as to whether this is upper, middle or lower lobe involvement and whether located anteriorly or posteriorly. If satisfactory drainage cannot be obtained by the postural method, then bronchoscopic drainage becomes necessary. Frequently lack of drainage is found to be due to inspissated secretions, granulations or bronchial stricture. The thickened secretions are aspirated, excessive granulations removed with forceps and strictures dilated. If there is any suspicion of foreign body, bronchoscopy should be done immediately.

Barach[6] and others have recommended nebulized penicillin in the treatment of lung abscess. He reported a case which recovered when aerosol penicillin was administered after no response had been obtained from penicillin intramuscularly. If satisfactory response is not obtained and drainage appears adequate, then nebulized penicillin should be given a trial. In young children this is best administered by a catheter in the oropharynx.

It is our feeling that the bronchoscopist and surgeon should be consulted early in the disease. It is unwise to wait until the cavity wall has become thickened or bronchiectasis extensive. If a satisfactory response is not obtained, certainly within six weeks, then surgical drainage should be considered. Neuhoff[7] advises immediate one stage surgical drainage in acute putrid abscess. The type of procedure must be decided in each individual case. Certain cases will probably require lobectomy or pneumonectomy. It is doubtful if cases with bronchial stricture will respond satisfactorily to drainage. Bronchoscopy should be advised in all cases in which surgery is deemed necessary.

Empyema following lung abscess requires surgical drainage. Treatment by aspiration and instillation of penicillin would not seem to be justified.

CASE REPORTS

Case 1.—J. W., a thirteen year old white male, had symptoms of a cold for two weeks. He was seized suddenly on January 18, 1945, with a severe pain in his right chest, with difficulty in breathing, followed by high fever.

When seen he appeared seriously ill. There was moderate degree of cyanosis, breathing was rapid, he was belching constantly, and his breath had an odor of hydrogen sulfide. Temperature was 105, pulse 140, and blood pressure 100/60.



Fig. 2. Case 1. Film almost two months later, showing complete clearing of the pathologic process.

Examination revealed enlarged and infected tonsils. The left lung was negative. There was tympanitic percussion over the entire right chest with auscultatory signs of tension pneumothorax. There was little change in position of mediastinum.

X-ray examination on admission to the hospital showed a pneumothorax on the right with adhesion to lateral chest wall, slight pleural fluid and appearance of cavity in the upper lobe.



Fig. 3. Case 2. Admission film showing abscess cavity with considerable reaction in the surrounding parenchyma.

Laboratory studies revealed the following: Hemoglobin 98 per cent, red blood cells 4,900,000, white blood cells 18,600, and a smear showed 88 per cent polymorphonuclear cells. Urinalysis was negative. He was referred to Dr. I. A. Bigger for surgical drainage.

A catheter was inserted through an intercostal trochar and a small amount of foul smelling, thin brown fluid obtained. Closed drainage was maintained by the water bottle method. Culture of pleural fluid showed anaerobic streptococci.

Patient was started on penicillin 15,000 units every three hours intramuscularly. This was continued for ten days, followed by sulfadiazine fifteen grains every four hours for twelve days.

There was a prompt drop in temperature within forty-eight hours. The empyema cleared promptly and the lung re-expanded. He continued with some cough for about two weeks after hospitalization. He was discharged on the twenty-fourth hospital day.

X-ray examination in March, 1945, showed complete clearing. Patient showed no pathology.

Case 2.—J. H., a three year eight months old white male, was admitted to the hospital with history of illness of one month's duration, beginning with an upper respiratory infection, and followed almost immediately by a rash diagnosed as scarlet fever. One week prior to admission he had a two day period of normal temperature, but this was followed by another febrile episode during which his temperature ranged between 101 and 104 degrees.



Fig. 4. Case 2. Admission film taken in upright position, showing abscess cavity with fluid level within the cavity.

At time of admission, the only other symptoms were a slight headache, one vomiting spell, lack of appetite and irritability.

Physical examination on admission revealed an acutely ill child sitting quietly in bed. Temperature was 101.6 degrees. There were herpetic lesions about the lips. Examination of the chest revealed dulness to percussion and diminished breath sounds below the right scapula. There was an occasional moist rale over this area.

Laboratory studies showed the following blood picture: Hemoglobin 63 per cent, red blood cells



Fig. 5. Case 2. Film six weeks after admission, showing complete clearing of process.

4,100,000, white blood cells 18,200 and a smear containing 76 per cent polymorphonuclear cells. Urinalysis showed a slight trace of albumin, but was otherwise negative. Tuberculin test (first strength P.P.D.) was negative. Sputum examination revealed no acid fast bacilli, but a technical error prevented culture of the one good specimen obtained. Chest x-ray at time of admission revealed a cavity in the right lung base, with marked reaction in the surrounding parenchyma. Upright films showed a fluid level within the cavity.

Diagnosis of lung abscess was made and the child was treated with penicillin 5,000 units intramuscularly every three hours and postural drainage.

The fever gradually dropped so that at the end of one week the daily maximum temperature was 101 degrees (rectal). On the eighth day of hospitalization, he had one prolonged spell of coughing which was productive of about one ounce of greenish yellow purulent material. The odor was not particularly bad. Immediately after this the temperature dropped within normal limits and was never again elevated.



Fig. 6. Case 3. Admission x-ray revealing massive effusion in the left chest and appearance of abscess cavity.

Serial x-ray films revealed a gradual diminution in the size of the lung cavity and clearing of the surrounding zone of reaction. Film taken six weeks after admission showed the lungs to be clear and penicillin was accordingly discontinued. In subsequent films at twelve weeks and ten months the lungs were still clear.

Case 3.—C. M., an eleven weeks' old baby boy, was well until ten days before admission to the hospital when he developed a cold which seemed to be improving. On January 16th, he began to have rapid respiration with temperature 104 degrees. He was brought into the hospital and started on penicillin



Fig. 7. Case 3. Film taken after aspiration of purulent material.

and for the next twenty-four hours seemed to improve. However, on January 18th he became worse with cyanosis and marked difficulty in breathing.

At this time his temperature was 103, pulse 150, and respiration 60. There was a grey cyanosis and he appeared desperately ill.

X-ray of the chest showed appearance of massive effusion on the left, with marked shift of heart and mediastinum to right and appearance of an abscess cavity in the upper lobe.

Physical examination suggested a tension pneumothorax on the left. A needle was inserted in the left anterior fifth interspace and air under pressure was evacuated. The needle was inserted posteriorly and 300 cc. of thick, yellow pus removed. 25,000 units of penicillin was instilled following aspiration. There was marked improvement with quiet respiration and the baby immediately dropped off

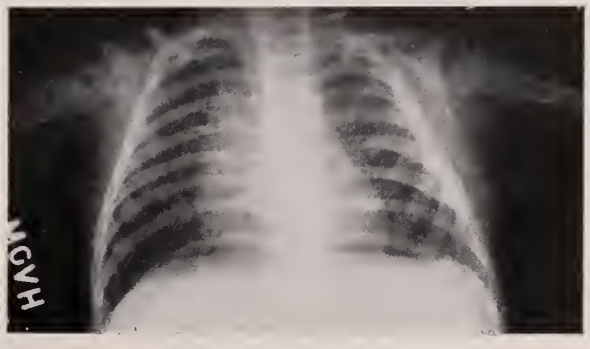


Fig. 8. Case 3. Film taken one month following admission. Lungs are clear.

to sleep. However, in about thirty minutes he again was in marked respiratory distress with recurrence of tension pneumothorax. He was then seen by Dr. I. A. Bigger who immediately inserted intercostal catheter with release of air followed by free drainage of pus. Closed drainage was continued by the water bottle method.

Laboratory studies showed hemoglobin 58 per cent, red blood cells 2,920,000. The smear showed 51 per cent polymorphonuclear cells and 49 per cent lymphs. Urinalysis was negative. Culture of pleural pus showed staphylococcus aureus. Penicillin 15,000 units every three hours, intramuscularly, was continued for thirty days.

There was slow, but progressive clearing of the empyema, the lung cleared and the patient was discharged on the thirty-sixth hospital day. Patient has remained well.

Due to persistent slight temperature elevation, sulfadiazine one grain every four hours was started on February 8, 1945, and continued for five days.

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DISCUSSION

DR. I. A. BIGGER, Richmond: In my experience lung abscess is considerably less common in children than in adults. I say this in spite of some of the figures presented from other clinics, particularly Dr. Graham's clinic and those from the Charity Hospital Clinic in New Orleans. I realize that they are often overlooked, but I am still convinced they are less frequent. They are more serious in children than in adults, and they are serious enough in adults. The results, up to recent years, have been very discouraging.

I should like to confine my remarks to the treatment of lung abscess. I feel, as Dr. Welchons does, that up to the present time we should have carried out intensive conservative therapy first, but such treatment should not be continued too long. We should give very large doses of penicillin, around 100,000 units every three hours in the adult, with comparable amounts for children. When one of the sulfa drugs is added some of these abscesses will clear up. If the results are not satisfactory we should do bronchoscopy, not only from the standpoint of therapy but to complete the diagnosis. Dr. Welchons pointed out there is always the possibility of the presence of a foreign body.

Lung abscesses will not clear up under chemotherapy of any kind without adequate drainage; failure is certain if adequate drainage is not instituted. If the response is not good following bronchoscopy, I think prompt surgical measures should be undertaken. In many cases—I believe in most—the simple surgical measures should be tried first. Unroofing the abscess, packing the cavity and keeping it open will cause many to heal. If they go into the stage of chronic abscess with associated bronchiectasis, only radical surgical measures will effect a cure. By that I mean lobectomy or pneumonectomy.

In multiple abscesses a combination of conservative surgery and continued intensive chemotherapy will cure some.

I am convinced that from now on the results in lung abscess will be much better than in the past, due to better understanding of the problem involved, the administration of large amounts of penicillin and sulfa drugs, and the addition of radical surgery to the conservative measures we have employed over a period of years.

I enjoyed Dr. Welchons' paper, and I think it is a very valuable contribution at this time.

DR. E. C. DRASH, Charlottesville: Dr. Welchons has been very fortunate in the results he obtained on these three children. Those of us who treated lung abscess in the old days, before chemotherapy, realize what a hopeless proposition it frequently was. We do not see the severe cases of pulmonary gangrene any more. Much to my surprise, we have seen a few cases of real lung abscess that recovered completely on chemotherapy and bronchoscopy.

On the other hand, these drugs so change the picture that there is a tendency to carry the treatment to a point beyond which it can do no good to the patient. One case we have seen recently is illustrative of that. An eighteen-year-old girl was kept in a hospital in the State for a period of nine months on chemotherapy. When we saw her she had not only lung abscess but rather extensive empyema. We drained the empyema first, and in the course of about six weeks the patient gained about fourteen pounds in weight. She had several bronchoscopies, and the lung abscess was not bothering her a great deal. Eventually we got around to draining the abscess, but the patient has had a pulmonary hemorrhage, and I think probably after this long period of time we are going to have to do a subtotal or total pneumonectomy. I think if appropriate measures had been instituted earlier she would have been saved complete loss of the affected lung.

These drugs have changed the old picture so much that we must all be on the lookout to care for these patients before they become chronic. We have seen some

cases treated over a long period of time in which the patient was almost symptomless, with very little cough and very little expectoration, yet the X-ray still shows the existence of a cavity lined with epithelium, which will continue there for years. I have one patient, an electrician, who had a lung abscess fifteen years ago. The X-ray still shows the existence of a small cavity. The patient is getting along so well that he refuses to have anything done about it, but I am afraid sometime in the future he will have difficulty.

We have seen patients discharged from the hospital with plural fluid following pneumonia. Several of these patients have come back with empyema, which made the problem much more difficult, and the convalescence much longer.

DR. E. L. KENDIG, JR., Richmond: I am up here merely to emphasize the several points we have tried to set forth. One is that lung abscess, particularly in infants and children, is a serious disease and that penicillin appears to be a valuable adjunct in the treatment. But three cases hardly constitute a large series. Drainage of the abscess is a necessity, and if this cannot be accomplished by postural methods then bronchoscopy is necessary. There are several problems in trying to induce postural drainage in the small child. An example was the three and one-half-year-old child. Tilting his bed to obtain the desired position was impossible, because we found the child would climb up on the bed. His mother was in constant attendance, or presumably so, but she had to leave sometimes. One way she found to get postural drainage for fifteen or twenty minutes a day was to let him hang over the end of his bed and hold onto the edge of his mother's cot while the mother threw pennies under the bed and let him point them out to her. Then the poor mother would crawl under the bed to get them. But she did manage in that way to keep him on postural drainage for a short period, and finally the child would have a little coughing spell.

DR. WELCHONS, closing the discussion: I thank Dr. Bigger, Dr. Drash and Dr. Kendig for their discussion. I have nothing to say except to emphasize what they all have said—that lung abscess is a serious disease. Don't keep these patients in the hospital too long on conservative treatment, but, if they are not responding to penicillin and postural drainage, institute other measures.

Floral Eponym (52)

DAHLIA

ANDERS DAHL, 1751-1789

Dahl was born March 17, 1751, and died May 20, 1789. He was Linnaeus' favorite pupil. His graduation thesis at Upsala was *Dissertatio entomoiogica bigas insectorum sisteus* . . . . Upsaliae, typis Edmannianis, 1775. He graduated M.D. at Kiel in 1786 but did not practice medicine, although he taught and was botanical demonstrator in the medical faculty at Aabo (Helsingfors). He gave to the University his herberium of some 6,000 species. Dahl never married. Cavanilles named the Dahlia for him the year before he died.

Dahli is a small but important genus of tuberous-rooted herbs of the Composite family. The dozen or more species that have contributed to the modern dahlia are all from the uplands of Mexico. A few other species are found in Central America and the northern part of South America.

SEVERE AND FATAL RHEUMATIC FEVER WITH PANCARDITIS IN VIRGINIA*

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In 1942 we presented a paper before this Society in which we endeavored to point out that too much emphasis was attached to the part played by polyarthritis in the disease. Thus, attention was diverted from the most important features of the disease, namely, the mildness of the joint symptoms, the involvement of the heart in nearly every case, and the marked tendency toward recurrence and chronicity. May we again call your serious attention to the above mentioned statement.

Today we wish to point out that in addition to the more insidious forms of rheumatic fever, which, nevertheless, may develop eventually into severe rheumatic heart disease, there occurs in Virginia severe and at times fatal forms of rheumatic fever with pancarditis.

Rheumatic fever is a reportable disease in the Scandinavian countries and the incidence per annum ranges from one to three per thousand population. In this country Atwater and Swift have estimated that there are about 170,000 cases of rheumatic fever per year and Paul estimates that there are about 840,000 cases of rheumatic heart disease, active and inactive. Cases of active rheumatic fever account for from 0.1 to 5 per cent of medical admissions in general hospitals and probably twice that percentage in children's hospitals. Surveys reveal an incidence of rheumatic heart disease among school children of 0.3 to 4 per cent and among college students from 0.6 to 1 per cent. Rheumatic heart disease was found to be by far the greatest cause for rejection in the re-examination of 4,994 men rejected for general military services because of the diagnosis of cardiovascular defects. The incidence of rheumatic fever among infectious diseases is only exceeded by syphilis. Statistics of the Metropolitan Life Insurance Company show that between the ages of five and nineteen years, rheumatic fever is, among diseases, the leading cause of death. Hedley found that in Virginia from 1922 to 1936 the mortality rate from heart disease between the ages of five to twenty-four years was 11.2 per 100,000, and we agree with Hedley that practically all of these deaths were due to rheumatic heart disease.

At the rheumatic fever clinic we have seen from May 1, 1940, through April, 1946, 339 cases diagnosed definitely as rheumatic fever and rheumatic heart disease; forty cases of congenital heart disease, 99 cases of possible and potential rheumatic heart disease, and the diagnosis has been deferred in 365 cases. There have been 15 deaths due to rheumatic fever and rheumatic heart disease.

Statistics from the State of Virginia for the year 1945 reveal the following: Deaths from rheumatic fever and acute rheumatic heart disease 44; chronic rheumatic heart disease 419, or a total of 463 deaths due to rheumatic heart disease. Since 78 of the cases listed as dying because of chronic rheumatic heart disease were under thirty years of age, we believe that these could probably be classified under acute rheumatic heart disease, as congestive failure in chronic rheumatic cases under thirty is presumptive evidence of recurrent activity. There were 6,912 deaths from heart disease, with no mention made of rheumatic origin or condition; this did not include 159 congenital heart disease deaths; hence, we believe that since 81 of these cases were under thirty years of age, these were in all probability cases of rheumatic heart disease. Thus, there were 203 cases, in our opinion, of deaths due to actual active rheumatic fever carditis.

After careful consideration of the above facts, there is no doubt that the problem of rheumatic fever and rheumatic heart disease is one of the most serious medical problems in the United States and Virginia. The problem is of grave significance when considered from the number of deaths caused by the active disease as well as the large number of cardiac cripples and those later dying of chronic rheumatic heart disease. We wish to present a few cases illustrating the fact that we do see in Virginia severe and fatal or near fatal cases of rheumatic fever and pancarditis.

*Read at the meeting of the Medical Society of Virginia at Virginia Beach, October 14-16, 1946.

Case 1.—L. L. L., first seen in the rheumatic fever clinic on 1-27-43 at the age of fifteen years. She had tonsillitis often before a tonsillectomy was done at the age of six years. At nine years of age, in the winter, the patient had a first definite attack of rheumatic fever with pain in one hip and then in the other. She was in bed for several weeks. The next fall, at nine and a half years, there was a sudden onset of recurrent rheumatic fever, temperature 104, generalized maculo-papular rash, severe nose bleeds, and severe, acute migratory polyarthritis involving practically all joints. She was in bed for six months, suffered from orthopnea and had to use a back rest. At ten and a half years, the next fall, she had a recurrent milder attack of rheumatic fever with polyarthritis. She was in bed only a short time. At the age of eleven, the following summer, she had another severe attack of recurrent rheumatic fever with severe migratory polyarthritis and nose bleeds, temperature of 104. She was in bed several months. The patient had another severe spell the winter she was fourteen years old with fever, rash, nose bleeds, and polyarthritis, severe abdominal pains and cardiac decompensation.

After the last attack the patient did fairly well. The patient was not allowed to go to school but had to keep house and look after other children.

Physical examination revealed a tall, thin girl with an upper respiratory infection and cough, but examination of the lungs was negative. No evidence of congestive heart failure was present, the rate was 97. There were no thrills. The pulmonic second sound was greater than the aortic second sound and accentuated and split. The first sound at the apex was sharp and forceful. A long, loud, blowing systolic murmur was heard, loudest at the apex and transmitted to the axilla and precordium. A short, soft, low pitched, mid-diastolic murmur was present, localized at the apex. The heart was enlarged by physical examination and confirmed by x-ray and fluoroscopic studies which revealed enlargement, plus a straight left border and rather prominent pulmonary conus, suggesting mitral valve involvement.

The electrocardiogram was negative.

The diagnosis at this time was rheumatic fever, questionable inactive, mitral regurgitation and stenosis, and cardiac hypertrophy.

The patient's home situation remained very poor. She continued to do house work and then later, outside work. She came to the clinic irregularly. She was in the clinic about nine months before her death at which time she had recurrent rheumatic fever. The patient was next seen when she entered the Medical College of Virginia Hospital four days prior to her death with the following history and physical. The patient stated that three weeks prior to admission she was taken with a high fever, severe headache and polyarthritis. Two weeks later she entered the Medical College of Virginia Hospital very ill and orthopneic. On admission she was acutely ill, undernourished, had marked pallor and petechial rash on her chest. The neck veins were distended. There were moist rales at the bases of both lungs. The heart was markedly enlarged. The maximum apex impulse was located in the sixth interspace almost in the anterior axillary line. There was a harsh systolic murmur and a short presystolic murmur at the apex. There was a systolic thrill at the apex and the third left intercostal space. The liver was enlarged and tender. The temperature was 98.6, with respirations 30 and pulse 105. The patient became steadily worse and died.

Autopsy Report: A detailed report will not be attempted.

Lungs: Both lungs were covered by a very fine granular, fibrinous exudate. Both lungs were subcrepitant and had a doughy consistency except at the apex. On pressure, the alveoli and bronchi exuded a blood-tinged frothy fluid.

Heart: External description: The heart was markedly enlarged to the right and the apex was in the anterior axillary line about the sixth interspace. The pericardium was markedly thickened and was adherent to epicardium on all surfaces of the heart. Most of these adhesions were of recent character; however, there were numerous old fibrous adhesions present also. There was no free fluid in the pericardial sac. The heart weighed 450 grams. The epicardium was covered by fibrinous and fibrous tissue which was adherent to the pericardium. There were numerous subepicardial hemorrhages present on all surfaces.

The heart muscle was of somewhat softer consistency than usual. On sections the myocardium was brownish red in color and there was moderate diffuse scarring throughout. The wall of the right ventricle measured 0.5 cm. in thickness at the base and the wall of the left ventricle 1.8 cm. in thickness at a corresponding level. There was marked

dilatation of the left auricle and ventricle. The endocardium was smooth and glistening throughout except in the wall of the left auricle where it showed considerable degree of thickening and wrinkling. The chordae tendinae of the tricuspid valve and the leaflets were thin and delicate. The pulmonary valve was not remarkable. The mitral valve, however, was dilated, easily admitting four fingers. The chordae tendinae of this valve were shortened and thickened. Along the line of closure of the mitral valve there were numerous very fresh appearing vegetations, the largest measuring 1 mm. in diameter. The edges of the mitral leaflets showed rolling and thickening; however, there was no fusion at the commissures. The aortic valve also showed some rolling and thickening of the edges of the leaflets; however, there was no fusion at the commissures. On two of the aortic valves there were small fresh appearing vegetation, measuring approximately 5 mm. in diameter. These vegetations were present along the line of closure. The coronary ostia were patent and the coronary arteries were thin walled and elastic throughout. The intima of the aorta was smooth with a yellowish tinge.

The anatomical diagnosis was as follows: Rheumatic pancarditis, active and old. Aortic and mitral verrucae, cardiac hypertrophy and old rheumatic pneumonia. Central hepatic necrosis. Splenomegaly. Focal glomerular necrosis. Hyperplasia and erythrophagocytosis of lymph node. Pleural effusion, right. Ascites, 400 cc.

Case 2.—The patient, L. H., colored male, age 11½ years when first seen at the rheumatic fever clinic in May, 1940. At this time the history was as follows: There was no family history of rheumatic fever. He had frequent sore throats since early childhood. From the age of seven years on he had frequent joint and muscle pains. The winter he was ten years old he had an attack of rheumatic fever ushered in with severe abdominal pain.

An emergency appendectomy was done for this and a normal appendix was removed. The patient developed a four plus involvement of multiple joints and severe carditis with dyspnea, cough and edema. He was said to have been sick for eleven months following this.

At eleven years of age, in the spring, he had recurrent one plus involvement of the joints. He was seen in the rheumatic fever clinic where conditions were recorded as fair; his heart was much enlarged, to-and-fro murmurs were heard at the mitral area and the aortic area, a systolic thrill was felt in the suprasternal notch with marked pulsation, rate 80. Blood pressure 112/68. An electrocardiogram revealed a PR interval of .18, notched P in one and two, peaked T in one; sedimentation rate (Cutler) 25 mm. At that time he was taking, drops 10, tincture of digitalis daily, which was continued. For the next nine months he had occasional joint involvements which were of brief duration, epistaxis, frequent colds with which he would develop a tight stomach, liver enlarged two to three finger breadths below the costal margin, pain in his chest, and he would sleep with his head on two to three pillows.

At twelve years of age in the winter, he was admitted to the hospital with severe bronchitis, epistaxis, multiple joint involvement and right and left-sided heart failure. Electrocardiogram showed a PR interval of .20 to .22, axis plus 110; signs of marked myocardial damage. He improved after mercupurin and digitalization. He was transferred to the convalescent unit for six months, remaining on bed rest and digitalis gr. 1½ daily. He had several bouts of low grade fever, hemorrhage from his gums, joint involvement, attacks of abdominal pain with liver enlargement while here. His heart remained greatly enlarged and the to-and-fro mitral murmurs were so loud and widely transmitted that the other findings were obscured; however, aortic diastolic murmurs were believed present. Several attempts to discontinue digitalis were promptly followed by edema and tachycardia.

After his return to his home he continued on digitalis and refused to follow bed rest for long at a time. He had recurrent bouts of ascites and abdominal pain and loose cough and would call the doctor for mercupurin. Dyspnea was always present. On one occasion he had a localized pericardial friction rub which was heard for several days. On one occasion, the patient ate salt fish for supper and this was followed by immediate intense abdominal pain and swelling, relieved by a diuretic.

At thirteen years, in the spring, seven months after discharge from the convalescent home, the patient developed jaundice, generalized intense itching, distended and painful abdomen, liver much enlarged and pulsating. He was admitted to the hospital for two weeks and treated with oxygen, digitalis and mercupurin. Upon discharge the liver was not pulsating, but soon after his return home it was again

noticed and has remained so with steady enlargement now extending almost to the iliac crest. One month later he had a milder attack of jaundice, itching lasting several days and he felt very ill, had cardiac decompensation and was re-admitted to the hospital for three weeks.

Following this, he remained at home, up and down, always with cardiac decompensation to functional class three or four, fairly frequent calls for diuretics, continued digitalis. The heart progressed in size, the maximum apex impulse was in the seventh interspace at the anterior axillary line, right axis deviation advanced to plus 150, T wave on electrocardiogram flat or inverted.

Progress Notes 4-15-43: At fourteen and a half years of age, in the spring, he was re-admitted to the hospital at his own request because of a tight painful abdomen. He remained one week. His liver decreased in size remarkably and pulsations were not noticeable. Cardio-thoracic ratio was 75. Two months later he had a severe cold with persistent cough and precordial pain, liver enlarged and abdomen tight. Blood pressure 117/78. His pulse was 92. The patient requested a diuretic. During the following six months he requested diuretics several times because of a tight painful stomach. In the mid-winter at fifteen years, he had a rather severe nose bleed which required packing. During the last six months, he has requested monthly injections of diuretics. In the mid-summer at fifteen year of age, he was hospitalized a few days because of a painful swollen stomach and edema of the legs and feet, orthopnea and cough and chest pain. He was sent home after one or two small doses of diuretics without any symptomatic improvement. He did not improve at home and was readmitted to the hospital and became steadily worse, suffering from severe congestive heart failure and died one month after his last admission to the hospital.

The autopsy report by Dr. Howe was as follows: (Note—a detailed description of all organs will not be attempted.)

Heart and Pericardium: The pericardial sac was completely obliterated by dense, old fibrous adhesions. Heart weight, 950 grams with parietal pericardium attached. The heart was tremendously enlarged, the enlargement affecting all four chambers. The left ventricle measured 23 mm. in average thickness; the right ventricle measured 10 mm. The mitral valve ring 8 cm., pulmonic 7½ cm., aortic 4½ cm., tricuspid 14½ cm. All four chambers were markedly hypertrophied and dilated. The mitral valve leaflets showed scarring and thickening with fusion of the anterior and posterior leaflets narrowing the valve opening to a buttonhole like slit. There was a moderate amount of calcification on the auricular surface of the anterior mitral leaflet. The chordae tendinae were thickened and shortened and several showed small beads up to 2 mm. in diameter. There was a rather marked scarring of the endocardium of the left auricle immediately above the posterior mitral leaflet. The papillary muscles of the left ventricle were markedly hypertrophied. The tricuspid valve leaflets showed slight thickening and rolling of their free margins but without any marked scarring, retraction or deformities. The aortic valve leaflets were markedly thickened, scarred and retracted so that the depth of the leaflets was about half the normal. There was some calcium deposit in the valve leaflet. The pulmonic valve leaflets showed no changes. Except for the scarred area in the left ventricle, the endocardium throughout was smooth and glistening. The coronary ostiae were of normal caliber and the coronary arteries were patent throughout with smooth glistening intima. The aorta was of normal caliber and its intima throughout was smooth and glistening.

Microscopic Description: The heart showed an old fibrous pericarditis containing many capillary vessels. The myocardial fibers were hypertrophied and showed patchy areas of marked degeneration and vacuolization of the muscle fibers. Fat stain showed that these areas were due to a marked fatty degeneration. There was also interstitial edema and some perivascular scarring but no Aschoff nodules, with only occasional Anitskow cells.

Anatomical Diagnosis: Old rheumatic heart disease involving mitral, aortic and tricuspid valves:—

Mitral stenosis and insufficiency.

Aortic stenosis and insufficiency.

Minimal scarring of tricuspid valve leaflets.

Marked hypertrophy and dilatation of all chambers of the heart.

Obliterative fibrous pericarditis.

Chronic passive congestion and edema of the lungs.

Hemorrhagic infarct, left lower lobe of the lung.

Cardiac cirrhosis of the liver.

Icterus.

Chronic passive congestion of the spleen.

Ascites.

Moderate pitting edema of the feet and ankles.

Surgical absence of appendix with old fibrous peritoneal adhesions.

Shallow linear ulcers of the cecum.

Polyp of the transverse colon.

Fatty degeneration of the myocardium.

Fatty infiltration of the kidney tubules, moderate.

Case 3.—A. C., white male, age eight years when first seen at the rheumatic fever clinic on January 28, 1943, the patient was apparently in good health until one year ago when he contracted scarlet fever which was severe. The patient was kept in bed for one month. During the next month the patient developed polyarthritis and all the large joints and fingers became swollen and painful and hot. This was accompanied by a marked malaise and some dyspnea and edema; also rapid and forceful palpitation.

Four months after scarlet fever, the patient was brought to the Medical College of Virginia Hospital with a main complaint of loss of strength and shortness of breath. At this time the temperature was 101.2, pulse 140, and respiration 40. The patient appeared ill and toxic, the tonsils were enlarged and cryptic, the liver was enlarged and tender, the heart was markedly enlarged, the cardio-thoracic ratio was 75 per cent. There was a gallop rhythm. There was a high-pitched, blowing, somewhat musical systolic murmur heard over the entire precordium, loudest at the apex and transmitted to the axilla. The patient responded fairly well to digitalis and mercupurin. Digitalis was discontinued one and a half weeks after admission.

One week after admission, the patient developed a pericardial effusion which persisted for about five weeks. The patient's temperature continued around 101, and the patient was very sick and drowsy. He gradually improved, became very active in bed and was hard to control. Because of the anemia which developed, the patient was given two small transfusions. Two months after the seize of pericarditis, the patient had an attack of nausea and vomiting which lasted for two days.

For the next five months the patient developed no new complications. He was active and unruly in bed. The heart remained much enlarged and loud presystolic and diastolic apical murmurs were heard, transmitted to the axilla, the pulmonic area and somewhat to the back. During his stay, the sedimentation rate dropped from 34 mm. to 10 mm. and the electrocardiogram still showed evidence of partial heart block as well as tachycardia. The hemoglobin increased from 52 per cent to 82 per cent and the white count decreased from 11,500 to 6,500.

Eight months after admission, upon insistence of his mother, the patient was discharged from the hospital to the home and instructed to continue bed rest and report to the rheumatic fever clinic; however, the patient did not follow instructions properly.

This patient was seen about every three months following his discharge from the hospital and he continued to reveal evidence of low grade activity of the rheumatic process as indicated by an increase in the sedimentation rate and a slight elevation of pulse rate and a slight fever. He also continued to have nose bleeds from time to time and upper respiratory infections. The mother did not cooperate in the handling of this child and made no real attempt to continue the rest as ordered. About eight and a half months after the patient was discharged from the hospital he was re-admitted to the Medical College of Virginia Hospital. The history at this time indicated that about one week prior to admission, the patient had eaten a quantity of peanuts and other party food and had become very sick after this. Due to lack of cooperation of the family, the history was considered unreliable. On admission the patient was quite ill and showed a marked pallor, complained of listlessness and pain in his chest, nausea and vomiting. The temperature was 104, the pulse 120 and the respiration 30. The patient showed evidence of right and left cardiac failure. A pericardial friction rub was heard three days after admission. Some symptomatic relief was obtained by bed rest, but about one week after admission, the patient developed more severe dyspnea and then orthopnea. He was given a mercurial diuretic and over the period of the next five and a half days was given thirteen and a half grains of digitalis. At the end of this time, the patient complained of marked precordial pain, spat up blood and coughed a great deal and died. An autopsy was refused.

Our final diagnosis on this case was rheumatic fever, active. Cardiac enlargement, right- and left-

sided failure, mitral regurgitation and stenosis, probable rheumatic pancarditis.

Case 4.—W. S., colored, male, age ten, first seen at the rheumatic fever clinic on April 22, 1942. The patient's mother stated that he had no illnesses requiring bed rest. Two years ago he had frequent tonsillitis, pains in the calves of the legs, with questionable swelling of the joints of the leg. One year ago, the patient complained of easy fatigue, shortness of breath and had to stop sports at this time. Two weeks ago the patient jumped from a bank and sprained his ankle. He continued to have pain in his ankle and was taken to his family doctor who advised bed rest and sent the child in here for a check-over.

Physical Examination: The patient was fully developed, poorly nourished, height 54¾ inches, weight 65½ pounds, temperature 100, rectal. The tonsils were enlarged, cryptic and inflamed. The lungs were normal. The heart sounds were definitely overactive, rate 120. There was a slight systolic thrill in the second left intercostal space. There was a diffuse, beam-like pulsation in the third and fourth intercostal space near the apex. The aortic second sound was absent, while the pulmonic second sound was diminished. The pulmonic first sound was accentuated. There was a medium long, slightly rough systolic murmur heard in the second left intercostal space. There was a high pitched systolic and an early blowing diastolic murmur heard in the third and fourth left intercostal spaces. There was also a low pitched, rough systolic murmur heard at the apex and transmitted to the axilla, and there was a low pitched diastolic murmur, rumbling, localized at the apex. The heart was enlarged on physical examination and by x-ray studies.

The diagnosis at this time was rheumatic fever, active, with mitral regurgitation and stenosis, aortic regurgitation and possibly aortic stenosis; also cardiac enlargement, and active rheumatic myocarditis. The patient was admitted to the hospital and remained there for one month. The diagnosis on entrance was as noted above and was the same on discharge. During the patients stay in the hospital he ran a temperature from 98 to 100.2 and the pulse ranged from 80 to 120. The patient had no subjective complaints during his stay in the hospital. The murmurs remained about the same. About four days before his discharge the patient developed the typical rheumatic fever type of rash, erythema marginatum, and this persisted for several days. The patient was transferred from the Medical College of Virginia Hospital to the Convalescent Home on 5-23-42 and left the Convalescent Home on 8-5-44.

Progress Notes 8-5-44: While in the Convalescent Home this patient continued to show some evidence of activity of the rheumatic infection for the next several months and around the seventh month of his stay in the Convalescent Home he had a definite flareup of polyarthritis and also a skin rash, the latter lasting from seven to ten days. The sedimentation rate at this time was 28 mm. About three to four months later he began to show systematic improvement and this seemed to continue. The patient was discharged to his home on 8-5-44, that is, after about two and a quarter years in the hospital, and we thought, of course, there was no evidence of activity of the rheumatic process at that time. He was sent home on digitalis gr. 1½ daily.

This patient was followed along in the clinic, returning about every three months and there was no evidence of activity of his rheumatic fever and his cardiac status remained about at a standstill.

About eight months later the patient was readmitted to the hospital with multiple arthritis, temperature 101. He had dyspnea, pulse 120, respiration 28. Examination of the heart was essentially the same as before. The sedimentation rate was 23 mm., there was definite anemia, and the white count was 15,000. The patient continued to show evidence of activity of his rheumatic infection, and the hemoglobin dropped to 42. About two and a half months later the patient developed a sore throat, his dyspnea increased, his temperature went up to around 102, his pulse rate ranged from 130 to 140 and his respirations were around 50. The patient went steadily down hill and had right- and left-sided failure. He had pain in his hip and knees and despite complete rest and treatment, the patient died the fourth month after his admission to the hospital. No autopsy was obtained.

Case 5.—D. M., white male, age 8, first seen at the rheumatic fever clinic on December 2, 1942. The history of rheumatic fever dated to four years previously. The patient was seen by a pediatrician and was kept in bed for about a month at that time. The mother stated the child had apparently recovered and had no symptoms until about two months prior to admission to the clinic when she noticed

that he began to get tired and listless and rather pale. About three weeks prior to admission he caught a cold during a wet spell and, following this, he had an acute illness with fever, cough and a nasal discharge. He then developed painful joints, particularly the knees and elbows and showed definite redness and swelling. The upper respiratory symptoms disappeared but the joint symptoms have remained. The father noticed that the patient was very short of breath at night.

Physical Examination: Height 49¾", weight 52½ pounds, pulse 122, temperature 100.2 rectal, respirations 26. The patient was poorly nourished, pale and listless. The tonsils were enlarged and diseased. The lungs were essentially negative. There was no pain or swelling of the joints noted. The heart was definitely enlarged, both by physical examination and roentgenological studies. The heart sounds were hyperactive and tick-tack in character. The pulmonic second sound and the first sound at the apex were both accentuated. There was a long, loud systolic murmur at the apex and transmitted to the axilla and to the back and to the left sternal border. There was a presystolic phase to this murmur and also a soft mid-diastolic murmur heard at the apex.

The sedimentation rate was 28 mm. The electrocardiogram showed evidence of myocardial damage.

Diagnosis: Active rheumatic fever with rheumatic heart disease, mitral regurgitation and stenosis, cardiac enlargement, secondary anemia. This patient was admitted to the hospital on 12-2-42 and remained in the hospital until 6-27-43 when he was discharged against the advice of the hospital, on the insistence of his father. Throughout the stay in the hospital, particularly the first two months, the patient had terrific nose bleeds and vomited blood clots. He received transfusions on several occasions. He had soreness in the back and in several of the large joints off and on. The sedimentation rate remained high. The hemoglobin fluctuated between 58 per cent and 78 per cent. The temperature fluctuated between 98 to 102, average of 100. Pulse from 90 to 130 with an average of 120. The heart remained enlarged and much overactive and the physical findings remained about the same. In the beginning of the fifth month, the patient had severe nose bleeds followed by nasal congestion, dyspnea, increase in pallor and sweating, with a temperature of 100 to 104, pulse 100 to 150, respirations 25 to 40. Following a transfusion, there was a reaction in which the temperature and respiration went very high. The electrocardiogram remained about the same, essentially within the limits of normal. The patient appeared to be in a "submarginal chorea" with gross twitching movements occasionally and picking movements of the hands. This seizure lasted four weeks and towards the end of that time, the patient was somewhat more comfortable. The temperature came down to 99 to 100, with the pulse still 120 to 140. At this time the parents demanded the discharge of the patient. We were not in contact with this patient after this, but there is a note stating that the patient died in the emergency room of the Medical College of Virginia Hospital on 8-23-43.

Case 6.—W. J., white male, first seen by me in his home in consultation with Dr. Philip Jones on May 19, 1944. This case history was quite interesting. The patient had been in good health until the present illness except that four or five years ago he had what was thought to be appendicits. He was not operated on at this time, and soon after he had another spell in which he had a high fever. One doctor thought it appendicitis and advised operation; however, the patient was seen by another doctor who diagnosed acute tonsillitis and was of the opinion that this caused the increase in temperature.

The patient was in good health after this until just about one month prior to the time we saw him. At this time, he had an acute illness and had quite a high fever; he was given some empirin compound and got along so nicely that he was allowed to go out and play. Within a few days he came in and complained of pain in his right knee. He soon had a temperature of 103 degrees, and was given one of the sulfonamides, but the medicine had no effect on his temperature. The pain migrated from his right knee to his arm and then his leg and he had acute joints at this time. He later had pain in his left leg. The patient was then taken to Grace Hospital where he remained for eleven days. The joint symptoms lasted from four to five days. While in the hospital the patient had an erythematous rash and it was felt he did have rheumatic fever. After staying in the hospital eleven days, the patient was taken home and he got along fairly well, but his respiration was not good after he got there and he had some nausea and vomiting.

It was interesting to note that the patient's cousin who slept in the room with him had a sore throat

about one week before the onset of the patient's present illness. The cousin got over his attack without difficulty, but the patient came down with the present illness following his sore throat.

Physical examination: The patient was a white boy, age ten years, lying in bed and very sick. He appeared definitely toxic and appeared anemic and his complexion was quite sallow. He had some dyspnea, but no definite orthopnea. He appeared to have lost weight. His throat was slightly red but not acutely inflamed. The tonsils had been cleanly removed. There was questionable increased pressure of the cervical veins.

Chest: Respiration was definitely increased. Breathing seemed somewhat labored. Lungs: There was definite dullness on percussion from the angle of the scapula to the base on the left with slight dullness at the extreme right base. On the left in this area, the breath sounds were increased and somewhat high pitched. No definite rales were heard and no friction rubs were heard.

Heart: The heart was markedly enlarged. The left border dullness was 11 cm. in the fifth interspace. The right border dullness was 4 cm. in the fourth interspace, the maximum apex impulse was 11 cm. to the left of the midsternal line and the mid-clavicular line was 6 cm. The rhythm was regular and the rate was elevated, being 104. Heard best at the apex, but transmitted to the axilla, was a long, high pitched, somewhat musical systolic murmur. There was also a definite mid-diastolic murmur which was lower pitched and rather rumbling in character and limited to the apex region. There was a systolic murmur heard at the base of the heart and in the third and fourth interspaces just to the left of the sternum there was a slight, high pitched, early blowing diastolic murmur. There was also a questionable to-and-fro pericardial friction rub, and I could not be sure that, at that time, this was an extra cardiac and not the to-and-fro murmur from the aortic area. The pulmonic second sound was markedly accentuated and greater than the aortic second sound which could scarcely be heard.

Abdomen: There was slight tenderness over the liver region. I thought that the liver percussed somewhat enlarged, but I could not feel the edge. The spleen was not palpable and there was no ascites.

Extremities: No petechiae were seen. There was no edema. There was no definite cyanosis. There was no enlargement of the joints, nor pain on motion, and there did not seem to be any tenderness on pressure. No rheumatic nodules were seen. There was no rash at this time. The temperature was 101.

This patient showed a marked hypochromic anemia. The sedimentation rate was 29 mm. The electrocardiogram showed a first degree heart block and other findings indicative of an active rheumatic myocarditis. The patient did not improve and was admitted to the Grace Hospital about one week after we first saw him. The patient was acutely ill, his temperature ranged from 100 to 103, pulse 100 to 120 and at times 150. His respirations ranged from 22 to 69. The patient's congestive failure became worse, he developed a definite pericardial rub and a pericardial effusion and died fifteen days after admission. Autopsy was refused.

This patient was treated for congestive failure with a xanthine, mercurial-xanthine diuretic, and digitalis, but, although his congestive failure seemed to improve from a mechanical standpoint, the patient died.

Case 7.—H. D. S., white male, age 7, first seen at the rheumatic fever clinic on April 1, 1942. In midwinter at seven years, the patient developed fever, anorexia and had shooting pains from the left knee to the hip joint. Multiple other large joints were involved in migratory fashion with limitation of motion and pain. The attending physician gave him sulfanilamide without relief. The patient was admitted to the hospital four days after the onset with a white blood count of 22,000, with 82 polys; the sedimentation rate was elevated, the temperature was 103 to 104, pulse 136, respiration 32. The examination of the lungs revealed a dullness in the right upper lobe. The abdomen was tender and there was a tenderness on motion of several large joints. A few small petechiáe over the body were noted. The heart was slightly enlarged. The next day following admission a pericardial friction rub was heard and a day later an apical systolic murmur was noted.

The patient gradually improved. Four blood cultures were negative and one month later he was pale and tired but did not complain. Electrocardiographic findings revealed a slight diphasic T in leads one and two. He was discharged—to continue bed rest at home.

Two months later in the spring he was seen in the rheumatic fever clinic. The tonsils were enlarged. The heart was normal, and the cardiothoracic ratio was normal, but there was a slight relative fullness in the region of the left ventricle and pulmonary area. The heart sounds were normal, the rate was 100 and there were no murmurs. The electrocardiogram revealed a slightly diphasic T wave. The sedimentation rate was 11 mm., and the white cell count 7,200.

The patient made steady subjective progress and gained weight until two months later, in the early summer, when he was seen and his heart appeared larger and there was a faint apical systolic murmur heard when the patient was in the prone position. Two months later in the midsummer he had a sore throat, upper respiratory infection with fever, and one month later, in the fall, he had a sedimentation rate of 21 mm., no murmurs, and was still gaining weight.

Two months later in the fall, he had a sore throat, tachycardia, fever of 103 to 104, four plus multiple joints, dyspnea, and was extremely ill. He had a cardio-thoracic ratio of 66 per cent, a friction rub and pseudo-gallop rhythm. Two weeks later the friction rub was gone, and the cardio-thoracic ratio was 54 per cent. He continued to improve, but the heart remained a little enlarged and the short systolic murmur was still present. Four months later he had a sore throat and fever, but with no further complications. The patient continued to run a low-grade intermittent fever with occasional peaks to 103, pulse 135 to 90 and respirations 40 to 20. The pallor persisted. Two months later in the spring and while still on bed rest, he developed typical erythema marginatum with a duration of two weeks. The sedimentation rate was 28 mm.

Following this he continued to improve until the winter when he was nine years old; he was gaining weight, his heart gradually decreased in size to 45 per cent cardio-thoracic ratio, and no murmurs. The sedimentation rate was 8 mm.

In the summer at nine years of age, he had a tonsillectomy after having been established on prophylactic sulfanilamide.

This patient has been seen in the clinic every three to four months since that time and was last seen on February 13, 1946, at which time he seemed to be doing very nicely. He had only three colds since his previous visit and gave no history suggestive of activity of his rheumatic manifestations. He had gained two and a half pounds, his temperature, blood pressure, and pulse rate were all normal and the sedimentation rate was normal.

On physical examination the patient's heart was not enlarged; a marked sinus arrhythmia with an extra systole was present. The sounds at the apex were distant and no murmurs were heard. The diagnosis was inactive rheumatic fever with possible and potential heart disease. We believe this patient did have a pancarditis in the beginning.

Case 8.—W. A. B., white male, age 8, first seen at the rheumatic fever clinic in June, 1940. Past History: The patient was said to have had frequent attacks of tonsillitis, first noted at the age of two years. The tonsils were removed at six years, about one year after the first attack of arthritis. Muscular or growing pains were present off and on from five through eight years.

At five years, in the winter, he had severe attacks of polyarthritis, duration three months. He was not seen in this clinic then.

At six years, the hospital record states that he was in the hospital following concussion of the brain due to trauma. The surgical interne recorded the heart as negative.

At seven years of age, in the spring, he had a severe attack of polyarthritis, involving his knees, wrists, hands and shoulders, which lasted three months.

At eight years of age, in the early summer, he was seen in the rheumatic fever clinic, when his parents wanted permission to send him to camp. His general nutrition seemed good and his general mentality average, though the patient was apprehensive, fearful and despondent. There was lymphoid tissue present in the throat and he had seven carious teeth. The cardiothoracic ratio was 47 percent. There was an apical systolic murmur suggesting mitral regurgitation. He was seen again three months later. He had not attended camp. The dentist had been unable to fix his teeth because of lack of cooperation on the part of the patient. No further symptoms had developed.

At the age of eight years, in the fall (four months after his initial visit to the clinic), the patient was admitted to the hospital with a history of pain in his hips of several days' duration and difficulty in moving his legs; also there were afternoon fever and profuse night sweats. The heart murmur was

typical of mitral regurgitation and a third sound was also present.

The patient remained in the hospital for two months and during this time he developed pericarditis with effusion, moderate left- and right-sided failure, with which he was desperately ill; he also had transient migratory joint pains. At the end of two months, although still rather ill, he was transferred to the convalescent home because of marked behavior problems and intense protests against his present environment. He remained in the convalescent home seven months where he continued to show active rheumatic infection, including a recurrent maculo-papular rash, an aching of the hands and feet and occasional sore throat. There were rheumatic nodules over the scalp and around the elbows. One month after admission (three months after the onset), the patient was discharged to his home, at which time his heart was moderately enlarged, and typical systolic and a definite diastolic murmur at the apex were present. He had gained weight, his color and appetite had improved, and his physical strength had increased.

The diagnosis at the time was active rheumatic fever, subsiding; mitral regurgitation and beginning stenosis; constitutional psychopath. Repeated attempts were made to obtain psychiatric aid for this child and family.

Progress Notes 4-8-43: At eleven years the patient had colds and an infected throat with accelerated sedimentation rate, which remained only a short while. About this time he was transferred to a class for problem children.

5-11-44: At twelve years of age, in the fall, he had a fever and a cold, with a sedimentation rate of 21 mm. He had bad teeth which he refused to have fixed. At thirteen years, in the spring, he developed difficulty on rising and could not straighten up or straighten his hands out. He had pains in his chest and respiratory difficulty. His heart was essentially the same. The sedimentation rate was 17 mm. The pulse rate was 82, repiration 20. In the clinic, he continued to be a marked behavior problem. In the late spring at thirteen years, and two months after the onset of this stiffness, etc., he developed redness and swelling of the right foot which he said he injured. The sedimentation rate was 18 mm. Pulse 74, respiration 20. The physical examination was essentially the same. There was a tenderness over the right arch. The electrocardiogram was within the limits of normal.

The patient had a further recurrence of his rheumatic process about four months after he was discharged from the convalescent home and was admitted to the Medical College of Virginia Hospital and remained there about one month.

We last saw this patient on April 29, 1945, about six months after he was last hospitalized and at this time he stated he was feeling all right. On physical examination his general appearance was good. His heart was not definitely enlarged, there was a definite systolic murmur heard at the apex and a probable mid-diastolic. There were no joint pains. Our diagnosis at this time was rheumatic heart disease, rheumatic fever subsiding or inactive, mitral regurgitation and possible stenosis developing.

Case 9.—White male (H. U.), age 16, first seen in consultation with Dr. J. J. Hulcher at the Grace Hospital on 6-24-44. The patient was in good health except that about three months prior to admission, he had a so-called streptococcic throat infection from which he had apparently recovered.

Two weeks before admission the patient first noted severe pain and weakness in his knees and this later developed into typical acute migratory polyarthritis. He had some generalized abdominal pain, but no tenderness and nose bleeds. He also had some dyspnea.

On physical examination at admission, the patient showed evidence of painful and swollen joints. There was no evidence of failure at this time.

Heart: The heart rate was rapid, ranging from 100 to 120, and the sounds were over-active. There was a loud, harsh systolic murmur localized at the apex.

Two days later, the patient developed a pericardial friction rub and then developed a pericardial effusion. X-ray studies revealed an enlargement of the heart with probable pericardial effusion. The sedimentation rate on admission was 28 and gradually improved to 11 mm. on discharge.

The white count was 9,600, with 78 per cent polys.

This patient remained in the hospital for ninety-three days. He developed congestive failure, severe anemia, and was very ill for about the first two months of his stay, after which he gradually began to improve. We treated his congestive failure with digitalis and mercupurin as well as the xanthine

derivatives from time to time. The patient was discharged home on complete bed rest.

The patient remained in bed for two months, and was then gradually up, and came in for a check-up about seven months after leaving the hospital, at which time he stated he had not had any dyspnea or chest pain. He had some nose bleeds but no joint pains except in his right ankle from time to time. At this time his pulse was 120, the heart was not enlarged and there was no evidence of congestive failure; there was a blowing, rather soft, fairly long systolic murmur heard best at the apex and transmitted to the axilla.

The laboratory reports were normal. Roentgenological studies of the heart were normal. The following is quoted from the notes on the patient at that time: "I think this patient has made a remarkable recovery. Of course, I think he has chronic rheumatic heart disease with mitral regurgitation; however, I do not believe I have ever seen a patient make a more beautiful recovery from so severe an attack of rheumatic fever. I think the patient had a definite rheumatic pancarditis during his acute illness, but, at the present time, the only real residium that is demonstrable is the slight mitral regurgitation." We have followed this patient along since then and he has not had any evidence of return of his rheumatic infection. He was last seen about four months ago and the heart was normal in size and the only remaining physical sign left indicating that the patient had previously had a pancarditis, was a slight systolic murmur at the apex and transmitted to the axilla, and, more important, in the recumbent position, the systolic murmur in the latter phase had a definite squeaking sound which we believe is almost pathognomonic of a previous pericarditis.

We have presented the above cases not in any attempt at statistical analysis, but in an attempt to try to show in general the picture which we see in fatal or near fatal cases of rheumatic fever, hoping thereby to impress upon all of us the seriousness of the disease. Of the six fatal cases, all died between ages of nine and fifteen years. The cases dying at fourteen to fifteen years of age had recurrent rheumatic fever frequently for six or seven years before death. One case had no real rest; the other was under our care for a long while. Case four died at thirteen and a quarter years, and had a questionable rheumatic fever at eight years of age; we saw him at ten years of age while in an acute attack of rheumatic fever. The patient was in the hospital for two and a half years, was discharged inactive, and died one year later with a recurrent attack of acute rheumatic fever. Of the three cases dying between nine and ten years of age, two cases had rheumatic fever with apparent recovery four years before the final fatal illness. In one of these two, the patient died about one and three-quarter years after recurrence, having been in the hospital for a year and a half. The other case died about six weeks after the onset of recurrent rheumatic fever. Case three had scarlet fever one year prior to death, then active rheumatic fever until death.

We presented three cases which we thought without doubt had severe pancarditis with rheumatic fever but who recovered. The first of these had several attacks of rheumatic fever, one being a very severe attack associated with pancarditis for which he was hospitalized for months. Due to the patient's psychopathic personality, we have not been able to follow him very closely, but on the last visit he had no definite cardiac enlargement, though there were murmurs indicating mitral stenosis and a previous pericarditis. The second of these we saw at seven years of age in an acute attack and he was admitted to the hospital at once and kept in the hospital and convalescent home for one and three-quarters years. He was last seen several months ago with a final diagnosis of past rheumatic fever and pancarditis, now inactive, and possible potential rheumatic heart disease. The final case was seen in his initial attack of rheumatic fever and pancarditis and was kept in the hospital for ninety-three days. He now shows no heart enlargement and only probable mitral regurgitation.

We have purposely presented severe cases showing little or no response to therapy. However, we do wish to emphasize again that we believe bed rest until a month or so after all evidence of activity is absent is absolutely imperative, be this months or years. We would like to mention also the advisability of high caloric, high vitamin diets, particularly vitamin C, iron as needed, and salicylates symptomatically. Furthermore, we urge constant watchfulness for early heart failure and the prompt and proper use of digitalis, along with xanthine and mercurial diuretics to combat this. We have found no place either for penicillin, sulfonamides or intravenous salicylates in the treatment of the acute

phases of this disease. We still look hopefully into the not too distant future where we shall have proper sanatoria for the care of the case of active rheumatic fever just as we now have for the care of tuberculosis.

DISCUSSION

DR. SAMUEL A. ANDERSON, JR., Richmond: First, I want to congratulate Dr. Camp on his very forceful presentation. Those of us who are in general practice or even the practice of pediatrics rarely have occasion to see such severe cases and have them under our immediate care; and his reminder that this is a very serious disease in enough instances to cause death in six children in the last four or five years, under his observation, is a very timely one. Because of this failure to see many serious cases in one's practice, I know I, and I believe many others of us, are likely to forget that the disease may be dangerous.

The lay public has had a considerable amount of education with regard to this disease in recent years. The Metropolitan Life Insurance Company has had, I think, some very tactfully worded and illustrated ads. Frequently I feel I am getting behind the lay public in being on the alert for early symptoms of rheumatic fever. I know Dr. Camp's paper emphasizes the severity of the disease. I cannot add to that. He has demonstrated it most forcefully. But from the point of view of the pediatrician, I wanted to emphasize the fact that in the rush and hurry of recent years I think I, and I expect others, have been likely to overlook some of what might be called the prodromal or insidious symptoms of this disease. Very frequently people whom I expect have read this published matter will call and ask what I think of a child's having nose-bleed or having abdominal pain, or they will say that a child usually of a sunny, happy disposition is cranky and does not get along with his playmates and comes in earlier and wants to rest earlier than he used to rest. Of course, vague leg pains cause one to suspect it. It is a long and tedious process to reassure people and tide them along until a diagnosis can be made. I was impressed by the fact that in this group of patients to whom Dr. Camp referred I think in about three hundred the diagnosis was deferred. We have to make a deferred diagnosis too often, and we have a problem on our hands in telling people what the status is at any one time. It is a difficult problem. These symptoms of leg pains, etc., can mean rheumatic fever. Frequently they do not, but we ought to remember that they may.

The Metropolitan Life Insurance Company has a booklet which I have seen, which has been compiled by authorities in this field. It is available for distribution to physicians only, and I think it would be well worth our while to procure one of these and refresh our minds as to these early signs, which I think are frequently brushed aside. There may be some additional information which would bring us more nearly up to date.

If there is anything in Dr. Camp's final sentence other than wishful thinking, I should like to urge all of us to think along that line. From the point of view of those of us dealing with children the problem of the care of rheumatic-fever patients, in the convalescent stage particularly, is a very real one. The child gets better, has no more leg pains, and has no shortness of breath while at rest. Amusement is limited in the home; and he becomes pampered, becomes cranky, and presents a very real problem in that home. If the disease could be looked upon very much as tuberculosis is looked upon, then convalescent homes could be established; and the children in those homes would be treated for the same thing; they would have companionship, would have schooling, would have proper rest and supervision. Then the emphasis which Dr. Camp put upon adequate bed rest, whether it be for months or years, would not be so difficult to enforce. If the members of the Medical Society of Virginia would think about such homes, scattered about in their local communities, it would be a tremendous contribution to the care of this disease.

DR. WALTER B. MARTIN, Norfolk: I, too, want to thank Dr. Camp for bringing to the attention of this Society a very important matter. It is rather interesting to note how much public attention has been paid to infantile paralysis as compared to heart disease resulting from rheumatic fever. Poliomyelitis has crippled its thousands, but rheumatic fever has crippled its tens of thousands. The amount of money contributed by the public, however, is tremendously disproportionate. This can be explained by the fact that the manifestations of poliomyelitis are before the eye; they are dramatic in character whereas the public does not realize the extent to which rheumatic fever can be crippling.

Dr. Camp has laid emphasis on the severe cases resulting in crippling and death. I think it is well also to emphasize the other side. Cases that are clinically relatively mild, with few joint manifestations, may be associated with severe cardiac changes, and, unless we are on the alert, cardiac complications may be missed entirely. I am quite sure that in the last twenty years we have missed many of such cases in their acute state. I have arrived at this conclusion from comparison of the number of cases of acute rheumatic fever that I have seen, and the number of cases of chronic rheumatic endocarditis observed. In taking the record of cases of chronic rheumatic endocarditis, often they gave no history of acute rheumatic fever, nor had rheumatic endocarditis been diagnosed in its active stage.

I would like to emphasize what was brought out in one of Dr. Camp's case records, that the onset of acute rheumatic fever may be associated with acute abdominal pain. I recall three such cases. In one of them a diagnosis of acute appendicitis was made and a normal appendix was removed. It is worth noting that the primary attack may occur in adult life, and even in late adult life. This was noted in the military service. I

had one case, a woman of sixty-five, apparently in her primary attack.

The epidemic character of the disease has been noted from time to time. One of the best known of these occurred at Camp Carson during the war. This epidemic persisted over a considerable length of time, and was finally brought in check by the prophylactic use of sulfadiazine.

Some comment might be made in reference to drug therapy. While there is no particular harm in the use of penicillin, apparently it is entirely useless. There is evidence, on the other hand, that the use of sulfa compounds is definitely harmful in the treatment of rheumatic fever. Dr. Camp has mentioned the question of intravenous salicylates. Following Cofield's report, considerable interest was manifested in the giving of massive doses of sodium salicylate, both by mouth and intravenously. It was suggested by Cofield that the maintenance of a high salicylate blood level, around 300 gamma would decrease the incidence of cardiac involvement. This has not been confirmed by other workers. On the other hand, the use of intravenous salicylates may be associated with unfavorable and disturbing reactions. Large doses of salicylate by mouth, enough to control the symptoms, is justified, but salicylates should be used intravenously with considerable caution.

The question of when to get these patients out of bed is a matter of considerable importance, since harm can be done by too prolonged bed rest, not made necessary by the heart condition. Observation of the pulse rate, temperature, leucocyte count, sedimentation rate, and electrocardiographic tracing, are all helpful in reaching this decision. They should be gotten up on a graduated schedule, under careful observation of the reaction of these factors.

I want to thank Dr. Camp again for bringing this important subject to our attention. It is a matter that should be on the hearts and minds of all physicians in the State. It is a matter of public concern, because, unfortunately, most of the cases occur in the lower income groups, and often the parents of these children are unable to care for them over a long period of time. We should be prepared to urge and support the establishment of special departments and institutions for the proper care of this important group of cases.

DR. CAMP, closing the discussion: I have nothing further to say except that I had brought up the more insidious factors of this disease in another paper, and I thought in this one I would present some of the more dramatic ones, in order to impress it upon us all.

Pulmonary Tuberculosis.

"Pulmonary tuberculosis is one of the chief causes of death among young people between the ages of 15 and 35," according to Ralph E. Dwork, M.D., of Denver, Colo., writing in the current issue of *Hygeia*, health magazine of the American Medical Association.

Dr. Dwork, senior resident physician at the National Jewish Hospital at Denver, states that "in recent years large numbers of previously undisclosed cases of pulmonary tuberculosis have come to light as a result of the numerous mass x-ray surveys that have been made by the armed forces and the Public Health Service in ccoperation with industry and local and state health departments. Now there is a growing tendency to assume that early tuberculosis does not have symptoms and can be found only by x-rays; the assumption is misleading."

The x-ray, he points out, is the best instrument for finding early cases of tuberculosis. "Until it is economically possible to examine the whole population periodically by x-rays," Dr. Dwork writes, "it would be foolhardy to neglect symptoms or combinations of symptoms that point to a diagnosis of pulmonary tuberculosis. Many people are found to have the disease who think they are not sick; the symptoms of early tuberculosis are not startling and are easily dismissed. People neglect these symptoms, or rationalize them away, or attribute them to totally unrelated causes."

Pointing out that pulmonary tuberculosis develops without noticeable symptoms in only one fifth or less of all who are found to have x-ray lesions, the author lists the most common symptoms as cough, expectoration, loss of weight, chest pain, weakness, fever, hemorrhage, night sweats, streaking, breathlessness, loss of appetite, chills, hoarseness, irritability, generalized aches and pains, headaches and insomnia.

USE OF PYRIBENZAMINE IN ERYTHEMA NODOSUM*

CARL P. PARKER, JR., M.D.,
JAMES L. CHITWOOD, M.D.,
and
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So far as we know, the use of the new antihistaminic drugs in the treatment of the erythematous diseases has not been reported. Apparently favorable results have been obtained by us with pyribenzamine in two cases of erythema nodosum. As a suggestion for further investigation, two brief case histories are presented.

CASE I

G. S., a 39 year old white male, had had painful reddened nodules over both lower extremities recurring at intervals for eight months, made worse by being on his feet.

Physical examination revealed a robust male with tender reddened nodules over both legs and thighs. Blood pressure was 110/70. Serology was negative. R.B.C. and hemoglobin were normal; W.B.C. varied from 8,750 to 11,400. Three differential counts were normal with eosinophils varying from 1 to 6 per cent. Urinalysis was normal except for a faint trace of albumin and occasional hyaline casts in one specimen. Chest x-ray was normal. Biopsy of one of the nodules was done and the section showed diffuse thickening of the walls of the small blood vessels in the subcutaneous tissue with marked edema of all layers and round cell infiltration most marked in the adventitia. In some cases, the exudate went beyond the adventitia and extended into the periarterial tissue forming a sharply demarcated perivascular focus. Endothelial hyperplasia was present in several arterioles.

Patient was treated with bed rest but several new nodules appeared. Patient was given pyribenzamine, 50 mgm., four times a day, and the redness and tenderness had disappeared completely four days later. Pyribenzamine was given for thirteen days and there was no recurrence of nodules nor in eleven days' observation after the drug was discontinued, although patient was allowed up during this time.

CASE II

M. H., a 31 year old white male, was admitted to the hospital because of nodular swelling over the anterior surface of both legs. Onset of symptoms was twenty days prior to admission with soreness and stiffness of the hips. A few days later, there was soreness in the flexor muscles and tendons of the thigh. Twelve days before admission, he developed reddened nodular areas on the dorsal surfaces of the lower tibiae. On admission, there were multiple, indurated, violaceous, circumscribed subcutaneous nodules over the anterior and lateral surface of both legs, from the knee to the ankle.

Urinalysis was normal. Complete blood count was normal. Sedimentation rate was 10 mm. per hour. Chest x-ray showed large oval shadows in both hilar areas. Coccidiodin and Tuberculin skin tests were negative. Blood Kahn was negative. Sputum examination was negative for acid fast bacilli.

The patient was kept in bed. Two days after admission and fourteen days after development of the first nodule, pyribenzamine, 50 mgm., t.i.d., was begun. Five days after pyribenzamine therapy was started, the redness of the nodules had faded and tenderness had disappeared. Ten days later, the redness had entirely disappeared but there were some indurated, subcutaneous areas present. Patient was allowed out of bed and the pyribenzamine continued until the twenty-fifth day without a recurrence of the skin lesions. The hilar nodes remained the same on x-ray examination. Sedimentation rate at time of discharge was 18 mm. per hour.

COMMENT

Both patients presented skin lesions which appeared to be erythema nodosum. In one, the biopsy specimen was reported as compatible with periarteritis nodosa, but there was no other clinical or labo-

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ratory evidence of periarteritis except for the skin lesions. In both patients, the lesions disappeared rapidly when pyribenzamine was given. In our experience, such rapid improvement has not been seen with bed rest alone or with other forms of therapy.

No conclusions are drawn but our results warrant further investigation and reports on the use of antihistamine drugs in the treatment of the erythematous and vascular diseases of the so-called "sensitivity" type.

Surgery, X-rays Aid in Cancer.

Two physicians discuss the benefits of surgery and x-ray in the treatment of cancer of the lung and of the larynx, the voice organ, in the May 10 issue of *The Journal of the American Medical Association.*

John C. Jones, M.D., Assistant Professor of Surgery, College of Medical Evangelists, Los Angeles, states that postmortem examinations show that cancer of the lung contributes 10 per cent of all adult male cancers and is second only to cancer of the stomach; therefore it is necessary to diagnose the disease earlier if a successful surgical cure is to be secured.

Between 80 to 90 per cent of patients complain of cough as the earliest symptom. Dr. Jones lists pain as the second most common symptom, then spitting of blood, loss of weight, wheezing, labored breathing, clubbing of the fingers and toes and hoarseness.

X-ray, states the author, "is the greatest single diagnostic aid at our disposal. . . . Bronschoscopy [inspection of the interior of the bronchi] is the next most important diagnostic aid and is the easiest and most accurate method of early diagnosis."

Treatment requires removal of one entire lung. Dr. Jones says x-ray treatment at best offers only relief for those patients who are inoperable.

In the past four years, Dr. Jones points out, 209 cases of cancer of the lung have been seen and diagnosed. Of these patients, 52 underwent surgery, being in the operable stage. Two patients died in the hospital and 11 died later. Thirty-nine patients remain alive, and a number of these will probably die of recurrence or spread of the disease.

Maurice Lenz, M.D., Professor of Clinical Radiology, Columbia University College of Physicians and Surgeons, New York, states that of 110 patients who received x-ray treatment for cancer of the larynx at the Presbyterian Hospital between 1931 and 1941, 30 were free from clinical evidence of cancer between five and 14 years. Of these, 23 patients are still alive.

Dr. Lenz points out that x-ray treatment is the method of choice for early cancer of the vocal cords but when the cancer spreads then laryngectomy is necessary. This operation requires the removal of the larynx.

A. M. A. News Briefs.

The American Medical Association has published a list of acceptable medical schools annually since 1910.

A permanent record of all licenses issued by state medical examining boards is kept by the American Medical Association.

The Bureau of Medical Economic Research reports that approximately three-fourths of the 200,000 physicians in the United States are engaged in active practice.

More than 250 delegates, representing 40 medical societies and 28 colleges, founded the American Medical Association in the hall of the Academy of Natural Sciences in Philadelphia on May 5, 1847.

One of the objectives of the Council on Foods and Nutrition of the American Medical Association is to promote improvements in the quality of foods through the application of scientific knowledge to the problems of the food industry.

SOME INTERESTING FEATURES OF ENDOCRINE AND METABOLIC DISTURBANCES, WITH SPECIAL REFERENCE TO THE SKIN

WILLIAM S. SLOAN, M.D.,
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For many years, the fact has been recognized that skin disorders frequently reflect an underlying metabolic condition or disturbance. During World War II, many men were rejected for dermatologic conditions: atopic dermatitis, severe acnes and psoriasis, lupus vulgaris and lupus erythematosus were definitely among the causes for rejection, but others included epidemolysis bullosa, dermatitis, herpetiformis, and any disfiguring or odorous disease, which, while in itself not serious, led to rejection because of the morale factors.

There is a physiological basis for this. The skin is the largest, and one of the most vital organs of the entire body. Like the liver, the skin can repair itself to a certain point; but when too much of its surface is destroyed, as in the case of extensive burns, for example, life is impossible.

In many disturbances of the endocrine glands, there is often an obscure interrelationship of more than one gland—the so-called "pluri-glandular syndrome". The skin and its accessory structures often partake of the general systemic disturbances; in fact, the first signs of the underlying disorder frequently become apparent on examination of the skin.

MYXEDEMA

In this condition there is a dryness and scaling of the skin with puffiness of the entire surface of the body which becomes noticeable first of all about the loose skin of the eyelids and face, producing the so-called "moon-faced" appearance. Secretion of fat and sweat is diminished, the hair becomes coarse and is often lost, and an urticarial eruption may appear. There is a tendency sometimes for excessive amounts of fat to be deposited. Chemical changes in the subcutaneous tissue suggest an excessive deposit of mucin.

Though not mentioned in many textbooks, one of the best diagnostic findings is the sluggish phase of relaxation, best seen in the Achilles' tendon after a reflex has been elicited. (Have patient on his knees. Relaxation is slow and prolonged on the return stroke).

*Read before the Fourth District and Southside Virginia Medical Society, at South Hill, Va., August 27, 1946.

HYPERTHYROIDISM

The peculiar color of the skin, a disturbance of pigmentation most aptly described as that of a "fading sunburn" needs emphasis. Because of the excessive heat and moisture, the skin is soft and thin, "smooth as velvet", atrophic, and dermographism and urticaria are common.

A greater amount of the matrix of the nails becomes visible. The nails may be brittle and the hair becomes sparse.

DISTURBANCES OF THE PITUITARY AND SUPRARENAL GLANDS

Albright, Kepler and others have shown that tumors of the adrenal cortex often produce a syndrome, the nature of which is such that disturbances of pituitary and suprarenal may well be discussed together. Cushing's syndrome [hypertension, purplish striae, "plethoric" obesity (thin skin; but these patients appear plethoric because blood vessels are easily seen), hirsutism, altered habitus, and suddenly appearing acne], all except hypertension are features apparent on inspection of the skin alone, making one suspicious of a disturbance associated with suprarenal cortex or pituitary.

In *Addison's Disease,* hyperpigmentation of the skin is the rule, the skin assuming a soft, smooth texture. The cardinal symptoms are asthenia and a gradual decline in general weight and strength associated with a uniformly low value for the systolic blood pressure and, in most instances, a generalized pigmentation of the skin which is especially pronounced in the folds of the body, the axillae, and in the genital and perianal regions. As stated, the skin assumes a soft, smooth texture. Here, of course, the inability of the tissues to retain fluid associated with the disturbance of sodium metabolism (the so-called, "salt and water" effect), robs the skin while depleting the entire body.

(Hemachromatosis is another disorder of pigmentation. It is characterized by diffuse bronzing of the skin, from which it gets the name "bronze diabetes", because there is usually an associated diabetes or some obscure disorder of the liver such as cirrhosis.)

DISTURBANCES OF THE PANCREAS

The affections of the skin which occur in diabetes mellitus are three: furunculosis, pruritus, and xanthomatosis, and the first two of these are probably directly attributable to the increase in the concentration of sugar in the skin.

There are also at least three problems, or questions, which intrigue every internist:

1. What are the causes of diabetic neuritis; specifically, why does it occur in well-controlled cases of diabetes almost as frequently as in uncontrolled diabetics? Joslin recommends: (a) Control of diabetes; (b) Saying prayers daily.
2. Diabetic retinitis: Why do we see extremely severe retinitis in controlled diabetes, while many cases of constant glycosuria have no appreciable retinitis?
3. Why do patients following complete pancreatectomy (as, for example, in carcinoma of pancreas), so-called "Whipple operation"—require only 30-40 units of insulin daily to control their "surgical" diabetes, while many diabetics require 3-4 times that amount? (Factor R-resistance to insulin)?

To these may be added the more general metabolic "puzzlers".

1. Why does psoriasis sometimes disappear entirely during pregnancy, only to reappear in exaggerated form within a short time after parturition?
2. Why does rheumatoid arthritis show remission with either pregnancy or jaundice?

The fact that many patients with gout show a diabetic glucose tolerance curve is throwing new light on this metabolic disorder. On the other hand, uric acid metabolism may be a clue in the chemistry of psoriasis, according to some recent experimental evidence.

One of the most interesting bits of work that promises to throw more light on the understanding of the skin is that of Lobitz at Mayo Clinic on the chemistry of sweat. These six papers, accepted but not yet published, will appear in the *Archives of Dermatology and Syphilology*. In these experiments, palmar sweat is studied as secreted (i.e., without contamination). To quote (from a personal communication this month): "We found that, regardless of whether the sweat was coming out of the sweat gland profusely or in intermittent bursts, it was an effective barrier to not only glucose but all reducing substances in normal individuals. This is a pretty good trick on the part of the skin and keeps sugar from lying around as a nice culture medium on the skin surface. In other words, by our technic, sugar was, in most instances, negative and never higher than about 10 mg. per cent when the blood sugar was normal. We raised the blood sugar to around 125 mg. per cent with oral glucose and still there was no spilling in the sweat. We then gave the glucose intravenously as intravenous glucose tolerance test and pushed the blood sugar up over 280 mg. per cent, but the sweat gland maintained its barrier. These were acute experiments so we finally were able to study two uncontrolled diabetics whose blood sugar had been elevated over 250 for at least several months that we knew of and again they showed no sugar in the sweat.

"Other things that we found out were that the sweat urea always remains about 20 mg. above the blood urea, and when we fed urea by the mouth we raised the blood urea to even as high as 350 without any clinical signs and the sweat urea remained above the blood urea and rose and fell with it. We were able to raise sweat creatine by feeding creatine by mouth, but the values were rather low. We were able to raise the blood uric acid by intravenous lithium urate to as high as 6 to 9 mg. per cent (no clinical signs appeared), and found that although the sweat uric acid rose and fell with the blood the sweat gland is about as reluctant to excrete uric acid as is the kidney. It is also interesting but not pertinent that the sweat gland can manufacture ammonia almost as efficiently as the kidney and does a better job when working intermittently than when sweating continuously. Why the sweat gland does this is pure speculation."

Since the sweat gland is comparable to the glomerulus of the kidney in many respects, some valuable contribution to metabolic diseases, as well as to dermatology, may well be made by this investigation of the chemistry of (uncontaminated) sweat.

Medical Arts Building.

THE TREATMENT OF SYPHILIS*

RAYMOND KIMBROUGH, M.D.,
Richmond, Virginia.

Approximately four years have elapsed since Mahoney and co-workers treated four cases of primary syphilis with penicillin and noticed disappearance of Spirocheta pallida from the lesions in a matter of hours, healing of the lesions in days, and a reversal of the serologic test for syphilis to negative in a matter of weeks. Since this initial demonstration there have been many attempts to determine the optimal time-dosage factors necessary to cure syphilis with penicillin.

Varying dosages and schedules, different fractions and preparations of penicillin in different kinds and stages of syphilis have been tried, followed-up, observed and reported. Much information has been gained. There is increasing confidence. For more than two years, there has been a feeling that some one would come out with the near perfect treatment-dosage-schedule presented with conclusive evidence. The variations in individual response, dosage-time-relations and penicillin fractions continue to prevent this simplification. These circumstances tend to compel every physician treating syphilis to be a sort of research worker or experimenter in the field of syphilis therapy. This may serve a useful purpose in causing him to observe more acutely and to follow-up more assiduously. In this transition period, without certainty as to what is the best treatment, one thing bristles with importance, i.e. *the urgency of following-up each patient treated by a rapid method.* Periodic physicals and quantitative serology are essential, as well as a spinal fluid examination six months after treatment. In late syphilis get a spinal fluid report before completing treatment.

Information up to now indicates that penicillin is the safest, quickest and most certain-to-cure agent for the treatment of most cases of syphilis. New information is accumulating on how to use it best, and while the role of impurities and the value of the different fractions is not completely settled, it is reassuring to know that at present we are not getting any appreciable amount of the ineffective K fraction.

Penicillin has gained strong support for treatment of all early syphilis (less than 4 years duration), syphilis in pregnancy, congenital syphilis, many cases of neurosyphilis, many cases of osseous, skin and other late syphilis.

When penicillin alone is used, it is considered that in *early syphilis* an effective dosage is 3 million units. Schedules vary from 40,000 to 60,000 units every 2 or 3 hours for 8 to 12 days with aqueous penicillin, hospitalization being required. The use of penicillin in oil and beeswax (POB) is gaining in popularity at present because it permits ambulatory treatment. A recent report by E. W. Thomas et al[1] on 802 cases of early syphilis getting 600,000 units of POB given at one injection daily for 8 days indicates high effectiveness. A number of clinics are now treating early syphilis with 600,000 units of POB in one daily injection for 5 days or longer. Reports on the results may be expected in the current literature at any time. Studies on the blood levels indicate that it is preferable to give POB late in the day because if given early in the day muscular activity leads to earlier absorption and excretion with less probability of a therapeutic level being maintained for the full 24 hours.

If relapse occurs after penicillin treatment in early syphilis it most frequently comes between 5 and 7 months after treatment. A sharp rise in the quantitative titer is considered evidence of an impending relapse.

The time required for serology to return to negative after penicillin treatment depends largely upon how long the disease was present before treatment was instituted. In very early cases of a few weeks' duration, the serology may be negative in 2 to 4 months after treatment, while in late syphilis it may be longer than a year before becoming negative. As after other treatment there may be some cases that will become Wassermann-fast, or seroresistant, permanently.

Increasing evidence indicates that penicillin is the treatment of choice in syphilis in pregnancy. Quantitative serology at regular intervals is necessary to safeguard against relapse and for criteria as to cure.

Congenital syphilis in early and late stages re-

*Read in the Symposium on Therapy at the Medical College of Virginia, Richmond, February 19, 1947.

spends satisfactorily to penicillin therapy in most cases. Interstitial keratitis and juvenile paresis are thought to need fever therapy with penicillin. Wilkinson[2] found that 20,000 to 40,000 units per kg. given in 60 to 80 divided doses over 7½ to 10 days was satisfactory. Ingram et al[3] advises a substantial increase in dosage over that equal to 2.4 millions for a 150 pound adult.

Many cases of neurosyphilis are responding favorably to penicillin and striking improvement in the cerebrospinal fluid abnormalities is obtained when adequate dosage over a two week period is maintained. It is probable that a total dosage above 6,000,000 units should be employed in a 10 to 14 day period or longer. At present POB on an ambulatory basis with 600,000 units at one injection daily for 10 to 20 days is being tried and there should be reports of interest on this in the future. Many clinics are continuing around-the-clock therapy and adding fever in symptomatic and optic atrophy cases.

In all *late syphilis* there is no urgency and treatment reactions may be dangerous. S. Olansky[4] reports Herxheimer reactions with fever up to 104°F. following the very small initial dose of 1,000 units of penicillin. He advises in late latent and late symptomatic syphilis that bismuth be given before starting penicillin if accidents are to be avoided. A point of interest here is that deaths have followed in 12 hours the beginning of penicillin for carbuncle, pneumonia, etc., and autopsy showed undiagnosed luetic aortitis or cardiovascular syphilis.

The use of penicillin in cardiovascular syphilis should be with caution and after bismuth. This danger would make it advisable to check up on all patients with regard to cardiovascular syphilis before starting penicillin for treatment of any disease.

In rapid treatment of syphilis the problems of reinfection assume importance comparable to the need for follow-up. In most areas of this state your local or state health department can be of assistance in helping trace or locate contacts. Also, your patients may be sent to one of the Rapid Treatment Hospitals, or the clinics in the larger cities, to get diagnostic studies and lumbar punctures and will be referred back to you if desired.

With our present information it is believed that if each of us asks ourself how would we want to be treated, the answer would be in many cases "give penicillin a thorough trial first, because it is safe and quick, observe and follow-up carefully for evidences of failure to cure and later if necessary resort to arsenic, bismuth, or fever". Since many patients may not remain under observation after treatment the inclusion of 10 to 20 arsenical treatments and 8 to 10 bismuth treatments in the 10 or 12 weeks after penicillin may serve to improve the follow-up observations. Also, many syphilologists believe that such combined treatment is more effective. It is believed that the decision as to penicillin alone or combined therapy should be decided on consideration of the individual case.

The time when most syphilis may be treated adequately by doctors in general practice seems close at hand.

The *Journal of Venereal Disease Information* includes original articles and abstracts from the current literature on this subject. It may be had from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., for seventy-five cents per year.

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Schering Extends Radiographic Research.

Drs. Harold L. Temple and Sydney Weintraub, of the Department of Radiology of Cornell University School of Medicine, New York, have been granted a research fund to support further studies in the field of radio-opaque media. The grant has been established by Schering Corporation, of Bloomfield and Union, New Jersey.

PUBLIC HEALTH

L. J. ROPER, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for May, 1947, as compared with the same month in 1946, and for the period of January through May, 1947, compared with the same period in 1946, is as follows:

	May 1947	May 1946	Jan.-May 1947	Jan.-May 1946
Typhoid and Paratyphoid	9	3	31	27
Diarrhea and Dysentery	453	165	1,816	723
Measles	1,294	2,832	6,074	9,831
Scarlet Fever	102	233	760	1,746
Diphtheria	17	31	125	199
Poliomyelitis	2	2	14	8
Meningitis	8	16	55	132
Undulant Fever	10	6	26	19
Rocky Mountain Spotted Fever	6	6	7	8
Tularemia	2	3	28	29

SALMONELLA INFECTIONS

With the onset of warm weather increased prevalence of food poisoning may be expected. Food poisoning may, of course, develop in any season when food has been exposed to pathogenic bacteria, their toxins and chemical and biochemical poisons. Obviously, such factors as high temperature, wider dietary range, and vacation activities predispose to food poisoning during the summer months. The illness may vary markedly from a transient indisposition to that of a serious disease carrying high mortality. A wide variety of pathogenic bacteria is held responsible for human infection and toxemia and, among these, the salmonella group occupies an important position in the so-called food poisoning.

The first member of the salmonella group was identified in 1888 by Gärtner and was named salmonella enteriditis. Since then approximately 150 serologically different species have been reported and these in turn have been divided into nine groups. Most public health laboratories have facilities to name and to group the salmonella organism, but are unable to identify the species. This service is made available without cost through three national salmonella typing centers, and in the Virginia area the facilities of the University of Kentucky are used. It is accepted that all members of the salmonella family are potentially pathogenic to man. However, human infection is frequently accidental, the disease being normally endemic or epidemic in animal or avian families. Exceptions to this are found in the paratyphoid group (A, B & C) which are now recognized as species of the salmonella bacteria.

Salmonella infection in man is largely acquired through ingestion of food or drink contaminated by actual animal disease or by a wide range of infected food products. Such dietary items as meat, fish, poultry, eggs and dairy products serve as excellent media for bacterial multiplication when infected and allowed to stand at room temperatures. Direct and indirect transmission may result from food contaminated by human cases and carriers, by rodent feces and by insects.

The incubation period of salmonella infection is generally of short duration, frequently only a few hours and seldom longer than two or three days. Severity of the clinical picture varies markedly, but essentially symptoms and signs are those of enteric infection. Although isolated cases frequently appear, family and group illnesses of a food poisoning nature are common. The disease is generally not prolonged beyond a week's time and has a mortality not usually exceeding 2 per cent. The convalescent-carrier state may persist for several weeks and, like typhoid fever, a few cases will remain permanent carriers.

Treatment largely remains on a symptomatic basis with the patient isolated and in bed during the febrile period. Some promise of specific therapy is offered by sulphadiazine, sulphaguanidine and sulphasuccinamide or by combinations of these drugs. Streptomycin, preferably given by mouth, may also be helpful alone or with sulphanyl therapy. If possible, medication should be maintained several days beyond clinical recovery, as otherwise symptomatic or bacterial relapse may be expected. In the interest of control it is advised that release be based upon repeatedly negative fecal laboratory examinations.

Methods of prevention and control of salmonella infection are summarized as follows:

1. Pasteurization of milk and other dairy supplies.
2. Adequate cooking and canning of all food stuffs.
3. Careful washing of all foods whenever practicable.
4. Refrigeration of perishable foods below 50° F.
5. The maintenance of adequate food inspectional services.
6. Insect and rodent control program.
7. The control of known cases and carriers of salmonella infection.
8. Supervision of water treatment facilities.

MEDICAL SOCIETY OF VIRGINIA

PUBLIC RELATIONS

Organized Effort Essential

In previous issues of VIRGINIA MEDICAL MONTHLY, and in other communications with Councilors, members of the District Council, and officials of local medical societies, we have endeavored to stress the importance of organizing our efforts if results in Public Relations are to be expected. The response has been encouraging and stimulating to the point of suggesting further improvement.

We are glad to report that members of the District Council have been named for nearly every medical society in Virginia, and for almost every county in which there are doctors but no medical society; one hundred and twenty in number, to work under the direction of the nine Councilors in Virginia.

The Public Relations Department has offered suggestions (from a program approved by the Public Relations Committee) for the Councilors, and has also made specific suggestions of activities for the members of the District Council.

Constitutional provision for the offices of Councilors and members of the District Council would probably have not been made, had the need of a program such as they could help carry out, not been seen.

The personnel are named, a program is suggested, specific activities are proposed, all of which is by way of setting up the necessary machinery for a functioning program.

Our program of Public Relations itself is so dependent upon the efforts of these officials and the cooperation they receive from officers and members of local medical societies, and the profession generally, that we wish to urge every Doctor of Medicine in Virginia to consider the importance of this, and to give his assistance. Laymen are urged to "consult their local physician". . . . We urge our doctors to "consult your member of the District Council."

Several medical societies in Virginia have active Public Relations Committees. It is hoped that more of such committees will be appointed in other medical societies to work with their member of the District Council in furthering a still better unified effort on the part of the medical profession of Virginia to achieve our objective.

We should like to reiterate our enthusiasm over results accomplished so far, and our interest in the challenge this success affords everyone interested in (1) our Present System of Medicine and (2) more, and still better, medical care, for more people.

BOOK ANNOUNCEMENTS

Music in Medicine. By SIDNEY LICHT, M.D., Fellow, New York Academy of Medicine. New England Conservatory of Music, Boston, Massachusetts. 1946. xx-132 pages. Cloth. Price $3.00.

The application of music to medical therapy is as old as music and apparently antedates the origin of the earliest knowledge concerning human disease and its treatment. In modern times, the scientific foundation of medicine has caused our profession to veer away from application of such intangible therapeutic measures as music. More recently, renewed interest has been awakened by the use of music in certain psychiatric disorders and many reports have been published in the medical literature with some rather unorthodox claims and overenthusiastic statements in the musical literature.

"Music in Medicine", written by a physician who is also a musician, is the most practical short treatise on the subject that has been seen by the reviewer. The material presented is concise, well organized and based on very sound fundamental principles, both of music and of medicine. No exaggerated or overenthusiastic claims are made. There is a recognition of the value of music in lifting the morale and increasing the comfort and satisfaction of ill persons. The fundamental facts concerning the practical use of music in the sick room and in hospitals is well described.

The chapters consider briefly the history of music in medicine, the philosophy and psychology of music; then, in more detail, describe what is known and practical in music as occupational therapy in psychiatry, for meal times, for the bed patients and as diversion and entertainment to the convalescent patient. There is additional material concerning the technical uses and advantages of certain types of public address systems and musical instruments and the proper equipment and library for different size hospitals. Dr. Licht recommends urgently that only well qualified musicians with adequate training as hospital special service personnel, be employed by hospitals and that the musical schools in the United States initiate special courses for musicians who plan to enter this type of work. He presents a suggested curriculum for such students of music and includes psychology, physiology, physics, occupational therapy and such courses for their education.

Personal experienoe by the reviewer with the use of music in naval hospitals during the war, produced the definite conviction that the correct type of music, properly applied in hospitals, resulted in a shorter period of convalescence and more rapid recovery of the patient, with earlier discharge from the hospital. The patients were in better spirits, particularly during the period of convalescence when they are often very restless and dissatisfied with hospital routine. This experience has convinced the reviewer that the judicious use of music in private hospitals would be of great benefit, both to the patient and to the hospital, and more than repay the amount of money spent on such a program. This book is the best textbook for hospital administrators interested in such a program and every hospital director should make it a part of his library.

G. Z. WILLIAMS.

The Compleat Pediatrician. Practical, Diagnostic, Therapeutic, and Preventive Pediatrics. By WILBURT C. DAVISON, M.A., D.Sc., M.D., Professor of Pediatrics, Duke University School of Medicine, and Pediatrician, Duke Hospital; Formerly Acting Head of Department of Pediatrics, The Johns Hopkins University School of Medicine; etc. Fifth Edition. Duke University Press, Durham, North Carolina. 1946. vii-256 pages. Cloth. Price $3.75.

This book, which started as a scrapbook of pediatric notes, has been developed into a remarkable practical quick reference text. The subject of pediatrics is approached from the symptoms and signs that the child may show rather than from the systematic descriptions of various diseases. It is complete and practical and the fifth edition has brought the subjects of chemotherapy, infectious diseases, and tropical diseases up to date. It is indeed the best quick reference pediatric work available.

H. T. DOUGAN.

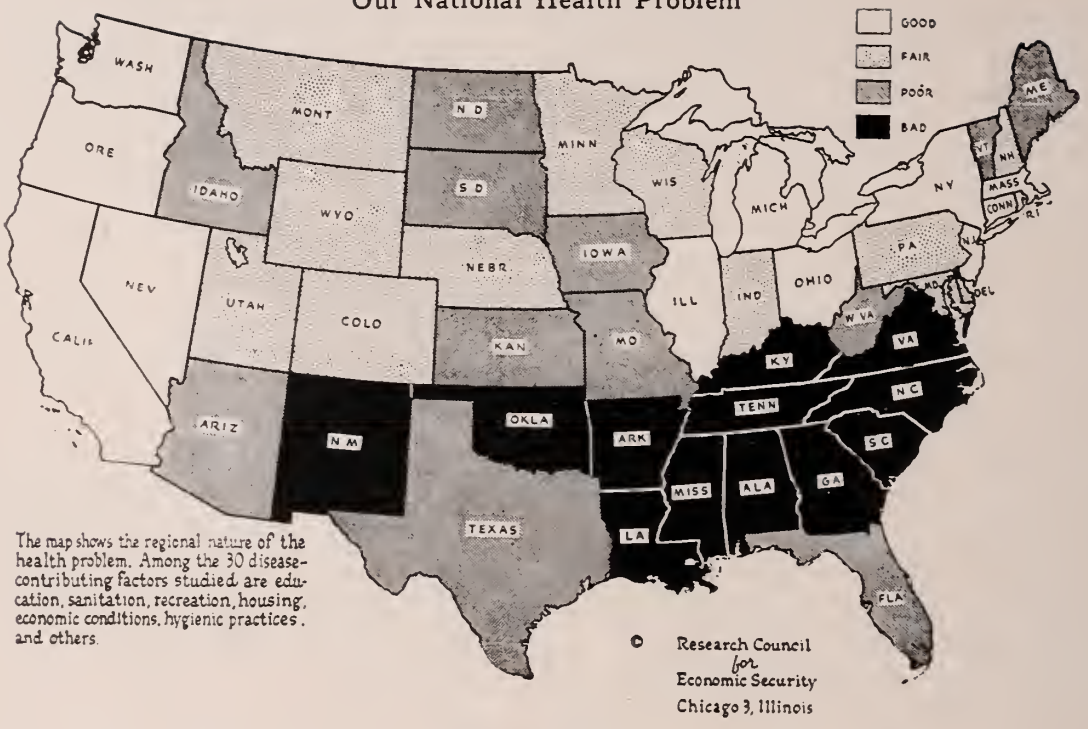
The American Hospital. By E. H. L. CORWIN, Ph.D., Executive Secretary, Committee on Public Health Relations the New York Academy of Medicine; Honorary Charter Fellow of the American College of Hospital Administrators; Former Secretary General and Honorary President of the International Hospital Association. New York. The Commonwealth Fund. 1946. 226 pages. Cloth. Price $1.50.

This monograph on the American Hospital was published under the auspices of the Committee on Medicine and the Changing Order of the New York Academy of Medicine. It is one in which you can find almost anything you might want to know about the modern hospital—information that is available in no other single volume.

M. P. R.

EDITORIALS

Our National Health Problem



The map shows the regional nature of the health problem. Among the 30 disease-contributing factors studied are education, sanitation, recreation, housing, economic conditions, hygienic practices, and others.

Sanitation

UNDER sanitation in the above survey, are housing and sewerage disposal. In 1940 fifty-six and one-half per cent of the houses in Virginia were without sewer connections and 23.3 per cent were in need of major repairs. In Massachusetts only 6 per cent of the houses were without sewer connections. In Mississippi 81 per cent of the houses lacked sewer connections. A glance at the columns of figures in the survey shows that there is an inverse correlation between houses without sewer connection and urban population. Actually the coefficient of correlation figures ought to be —0.817 and the probable error ±.048. Since the coefficient of correlation is 17 times the probable error it is highly significant.

In regard to houses needing major repairs there were 19 states as bad or worse than Virginia. Her percentage of defective housing was 23.3 as compared with 18.3 per cent for the nation as a whole. These two factors, defective housing and lack of sewerage connection, were combined in a manner that was not stated under the general heading of Sanitation. Under this heading Virginia's grade was 31, whereas New York and Rhode Island each had a grade of one. Sixteen states had a higher grade than Virginia. Arkansas' grade was 48 which is not surprising to anyone who has driven through that state.

Years ago when your editor was health officer for Chesterfield County he tried to introduce a sanitary privy in the more populous parts of the county. The Chairman of the Board of Supervisors, who was also president of the Board of Health, said he much preferred a fence corner and would walk a mile to avoid using one of those new fangled contraptions. We told him that his aversion to a modern privy would not keep his children from having hookworm nor protect him from intestinal diseases. Needless to say we did not get far with the sanitary privy.

Meeting of the American Association of the History of Medicine

THE American Association of the History of Medicine held its twentieth annual meeting in the beautiful Allen Memorial of the Cleveland Medical Library, May 25th and 26th. This was the first time the Association has met so far west. Quite appropriately the program had to do chiefly with American Medicine, especially with medicine a hundred years ago. Dr. Sigerist described the world in 1847. Europe had recovered from the Napoleonic wars and was beginning to feel the effects of the industrial revolution. Against this background Owsei Temkin painted the picture of medicine in continental Europe, Larkey that of Great Britain and Genevieve Miller that of the United States. There was a tremendous difference between the advances made by the leaders in medicine and the general run of practice. In London and Dublin, for instance, Addison, Bright, Robert Adams, Graves and Stokes were making great discoveries in clinical medicine but a perusal of the *Lancet* shows that they were far in advance of the average practitioner. More detailed pictures of the American Medical scene were given by Philip Jordan who described the public health problems in the Minnesota lumber camps; Phyllis Allen who discussed early animalcular hypotheses; D. A. Tucker who gave a good account of Alonzo T. Kent, an early cardiologist of Cincinniati, who devised a compound sphygmograph and whose work was recognized abroad; Otto Glasser discussed American contributions to roentgenology; and L. J. Moorman gave a first hand description of pioneer medicine in the Southwest. Dr. Edward Tiffin, Ohio's first Governor, mixed medicine with politics from the time he moved to Ohio from Alexandria, Virginia, according to the story as told by L. F. Edwards.

One of the most interesting symposia was that on medical schools—those in California, Ohio and Vermont were discussed. They had much in common whether in the East, mid West or the Pacific Coast. At first they were largely personal affairs and there was much squabbling among the faculty and changing over from one school to another. Some one described Daniel Drake as a great organizer and disorganizer; a great founder and a great flounder. The chief asset of these early schools was the power to give a degree in medicine. To exercise this right necessitated a connection with some chartered college, but this connection was usually a nominal one. In California, Richard Beverly Cole, a native of Manchester, Virginia, changed his allegiance almost as much as Daniel Drake did in Ohio and Kentucky; sometimes he was connected with the University of the Pacific which finally became the Medical Department of Leland Stanford University and sometimes with Toland Medical College which eventually became the medical department of the University of California.

Chauncey Leake read in cadence a delightful account of Sir James Y. Simpson and chloroform, and E. Ashworth Underwood, Director of the Wellcome Historical Medical Museum, London, gave us a beautiful dissertation on Apollo and Terpsichore, Music and the Healing Art. At the annual dinner, two Cleveland doctors and two members of the Cleveland Orchestra fittingly enough rendered two selections of Brahms, one of which had been dedicated to the physiologist, Engelmann, and the other to the surgeon Billroth. John Fulton talked in his usual delightful manner of the correspondence between Harvey Cushing and Arnold Klebs and gave us a clear understanding of the natures of the two men and also of why Klebs left his wonderful library to the Yale Medical School.

The Medical Library Association

THE Medical Library Association held its 46th meeting in Cleveland on May 27th-29th. There were many new faces and we missed some of the old standbys. Dr. W. W. Francis had had a heart attack and his physical activities had been restricted to such an extent that he was unable to come to the meeting. The ladies of the Association do a tremendous amount of work and they conduct their meetings in a most business-like way. The Association has grown in importance so much that its membership is greatly sought after both abroad and in the United States. The committee on membership has its hands full with problems of eligibility.

There were a number of interesting symposia. The presiding officer of the first one informed us that the first definition of a symposium is "a drinking party". While the symposia did not live up to this definition, they were anything but dry. For instance there was one on "Visual Aids and the Medical Library" in which Tom Jones discussed the visual teaching media. He said the various media would never replace books but that they could make books much more useful. Dr. Bruno Gebhard, Director of the Cleveland Health Museum, described the possibilities of such a museum in teaching the lay public. Dr. Dittrick went into the history of the historical museum. The brilliant example of the British Museum which started with the collection of Sir Hans Sloan and became supreme in all fields, natural history, art, books, etc., was cited. Mr. Ralph Creer, secretary of the committee on motion pictures, explained the A. M. A.'s program. While the A. M. A. owns about forty films, its aim is to act as a clearing house for films. His committee hopes to be able to tell anyone interested where he might borrow the films desired. The librarian of the College of Physicians and Surgeons, Columbia University, described an ideal floor for storing and using film in a teaching institution. In their new building, which is still in the blueprint stage, for viewing films, they have a central hall seating 150 persons. There will also be separate cubicles for individual viewings and, of course, proper air conditioned storage space.

One afternoon was given over to a discussion of lighting, the Library of Congress Mission to Europe, the Veterans' Administration Medical Library Service, and the problems of constructing a medical dictionary. The Veterans' Administration is to have the Cumulative Index Medicus reprinted. Mr. Scott Adams of the Library of Congress Mission to Europe reported that the Army Medical Library had about 80 per cent of the German publications of the war years.

At the annual banquet, Dr. Morris Fishbein spoke on the subject "A Century of American Medicine". By way of introduction he said that Bill Nye was in the habit of submitting six or seven titles and then adding a postscript to the effect that it made no difference which title you selected you got the same speech. Dr. Fishbein spoke on the American Medical Association which started one hundred years ago, mainly for the purpose of improving medical education. Its first step was to appoint a committee to gather facts and establish standards. It then created a Council to enforce the standards by means of publicity. The Council on Medical Education and Hospitals published each year the results of the State Boards examinations showing the percentage of graduates of each school that passed the examinations. As other needed reforms, patent medicine, food adulteration, etc., appeared, the same technic was followed. The latest council to be formed is the Council on Medical Service. In this connection, Fishbein paid his respects in no uncertain terms to Dr. C. E. A. Winslow, Dr. P. H., and Editor of the *American Journal of Public Health* who at the last

annual banquet in New Haven made a speech in favor of federalizing the practice of medicine.

One of the most interesting things that Dr. Fishbein said was that in a meeting of the Honorary Consultants of the Army Medical Library that afternoon, steps were taken to improve the indexing of the World's Medical Literature. The idea towards which they were working was a monthly which would contain all the current titles, a yearly cumulative volume, and a five year cumulative volume. This would supplant the present Quarterly Cumulative Index Medicus and the Index Catalogue of the Army Medical Library and the Current List of Medical Literature.

SOCIETIES

Alleghany-Bath County Medical Society.

At a recent meeting, this Society elected delegates and alternates to the October meeting of the State Society, and also elected the following officers: President, Dr. M. B. Jarman, Hot Springs; vice-president, Dr. H. G. Hudnall, Covington; and secretary-treasurer, Dr. R. P. Hawkins (re-elected), Clifton Forge.

The Amelia County Medical Society,

A unit of the Fourth District and Southside Virginia Medical Association, held its annual meeting on May the 26th, at which time they elected delegate and alternate to the State meeting in October, and also elected the following as officers for the coming year: President, Dr. H. Cowles Rucker, Mattoax; vice-president, Dr. J. M. Habel, Jetersville; and secretary-treasurer, Dr. J. T. O'Neal, Amelia. Dr. O'Neal succeeds Dr. J. L. Hamner who has served in this office for over fifteen years.

The Alexandria Medical Society

Held its annual banquet on May 22nd at the Army and Navy Country Club in Arlington. Following the installation of the newly elected officers, the members of the Society and their wives were addressed by Mr. Arthur J. Casey, general manager of Radio Station WOL in Washington, who stressed the role of radio as a powerful educational medium.

Officers installed were: President, Dr. Harrison Picot; vice-president, Dr. Arthur J. Mourot; and secretary-treasurer, Dr. George Speck.

The next meeting of the Society will be held in September.

At a special meeting of the Society June 5th, the current controversy between the Alexandria Hospital and the City Council was considered and discussed by the members.

It was reaffirmed that the medical care of all individuals, regardless of financial status, is an obligation which the members assume and discharge daily.

Recognizing that the public might be misled into thinking that the attitudes expressed in the press on this subject are representative of the opinion of the physicians, when in fact they have not been consulted by either party to the controversy, a clarifying resolution was deemed important. It was agreed that other groups in the community have an interest in the solution of this problem.

At the conclusion of the meeting the following resolution was adopted:

WHEREAS, The physicians of the Alexandria Medical Society are vitally interested in the care of indigent patients and in the welfare of the Alexandria Hospital, and

WHEREAS, The Society feels that the care of the indigents of the city is the responsibility of the community as a whole, and

WHEREAS, The Board of Directors of the Alexandria Hospital and the City Council have been unable to arrive at any conclusion as to the cost of the care of indigents,

BE IT RESOLVED That the Alexandria Medical Society recommends that the proposal of the Alexandria Council of Social Agencies be accepted by the City Council and the Board of Directors of the Alexandria Hospital, and

BE IT FURTHER RESOLVED That the recommendations of a consultant be made a basis for settlement.

GEORGE SPECK, M.D.
Secretary.

Lynchburg Academy of Medicine.

At the June meeting of the Academy, Dr. S. R. Arnold of Amherst was admitted to membership. The program was given by Dr. McLemore Birdsong and Dr. William Grossman of the University of

Virginia, their subject being Diarrhea.

Dr. Edwin A. Harper and Dr. Robt. H. Cox, Jr., are president and secretary, respectively, of the Academy.

Virginia Peninsula Academy of Medicine.

At the May meeting of the Academy, Dr. Joseph N. Hayman, Professor of Medicine at Western Reserve University School of Medicine, Cleveland, Ohio, spoke on "The Pathological Physiology of Kidney Disease". There was an attendance of seventy and Dr. George G. Hankins, Newport News, vice-president, presided in the absence of Dr. Robert H. Wright, president. Drs. I. F. Nesbitt and William L. Davis, Newport News, and Eugene D. Hardin, Hilton Village, were admitted into membership.

New officers were elected as follows: President, Dr. Paul Hogg, Newport News; vice-president, Dr. Eldred S. Jones, Hampton; and secretary-treasurer, Dr. Chester D. Bradley (re-elected), Newport News. The next meeting of the Academy will be held in September.

During the session just closed the Society was addressed by the following speakers: Dr. Frank Lock, Winston-Salem, N. C.; Dr. Paul D. Camp, Richmond; Dr. William L. Thomas, Durham, N. C.; Dr. Joseph Hughes, Philadelphia; Dr. Fletcher Woodward, Charlottesville; Dr. J. Grafton Love, Rochester, Minn.; Dr. Harry Bakwin, New York, N. Y.; Dr. Charles Troland, Richmond; Dr. Benjamin Baker, Baltimore, Md.; Dr. Joseph N. Hayman, Cleveland, O. Papers presented by these speakers included endometriosis, heart disease, vaginitis, psychoneurosis, esophageal disease, protruded intervertebral disc, child psychology, head injury and kidney disease. One meeting was devoted to a clinicopathological conference. The Virginia Peninsula Academy of Medicine also had the honor of a visit from Dr. Harrison H. Shoulders, president of the American Medical Association, whom it entertained at Newport News.

NEWS

Medical College Finals.

UNIVERSITY OF VIRGINIA

Commencement exercises of the Medical Department of the University of Virginia were held jointly with those of the other departments June 13-16, the social features being the usual dances, dinners and concert. There were sixty-seven graduates in the Department of Medicine, their names and hospital appointments being given below:

UNIVERSITY OF VIRGINIA HOSPITAL, Charlottesville—Drs. Robert Whitehead Alfriend, Norfolk; Carl Ashton Broaddus, Jr., Newtown; Edmund Madison Chitwood, Jr., Wytheville; James Hicks Corey, Greenville, N. C.; Dorris Alvin Cunningham, Jonesville; Powell Garland Dillard, Jr., Lynchburg; Ernest Malcolm Dixon, Wilkinsburg, Pa.; Claiborne Willcox Fitchett, Norfolk; Edward Reginald Hipp, Jr., Charlotte, N. C.; Glenn Hickam Richmond, Norton; Frank Marcellus Ripberger, Jr., Blackstone; and Gary Grayson Suter, Fort Defiance (Pathology Department).

DEPAUL HOSPITAL, Norfolk—Dr. James Paul Elkins, Indianapolis, Ind.

LAKESIDE HOSPITAL, Cleveland, Ohio—Dr. Crescent Frank Balmenti, Youngstown, Ohio.

MT. SINAI HOSPITAL, Cleveland, Ohio—Dr. Louis Herman Calisch, Danville.

AKRON CITY HOSPITAL, Akron, Ohio—Dr. James Maurice Knopp, Staunton.

BARONESS ERLANGER HOSPITAL, Chattanooga, Tenn.—Drs. Hugh Miller Batson, Jr., and Billy Norris Golden, both of Hattiesburg, Miss.

CHARLESTON GENERAL HOSPITAL, Charleston, W. Va.—Dr. Robert Ludington Brown, III, Parkersburg, W. Va.

PARKLAND HOSPITAL, Dallas, Texas—Dr. William Knox Brown, Houston, Texas.

BAYLOR UNIVERSITY HOSPITAL, Dallas, Texas—Dr. David Alexander Christian, III, Appomattox.

STRONG MEMORIAL HOSPITAL, Rochester, N. Y.—Drs. Herbert Augustine Claiborne, Jr., Richmond, and James Barrett Jones, Charlottesville.

SYRACUSE UNIVERSITY HOSPITAL, Syracuse, N. Y.—Drs. Robert Castleman Green, Jr., Winchester, and David Cole Wilson, Jr., Charlottesville.

KINGS COUNTY HOSPITAL, Brooklyn, N. Y.—Dr. Stuart Leslie Haas, Springfield, Mass.

BELLEVUE HOSPITAL, New York, N. Y.—Drs.

Emory Falcon Hodges, Jr., Petersburg; and Columbus Downing Tait, Jr., Chester.

THE NEW YORK HOSPITAL, New York, N. Y.—Dr. William Andrew MacIlwaine, Charlottesville.

THE MOUNT SINAI HOSPITAL, New York, N. Y.—Dr. Murray Benjamin Pincus, Wilkes-Barre, Pa.

NEW YORK POST-GRADUATE HOSPITAL, New York N. Y.—Dr. Nathaniel Lancaster Rodgers, Martinsburg, W. Va.

FLOWER AND FIFTH AVENUE HOSPITAL, New York, N. Y.—Dr. Eugene David Schwartz, Newport News.

BETH ISRAEL HOSPITAL, New York, N. Y.—Dr. Alfred Yager, Englewood, N. J.

BRADY UROLOGICAL INSTITUTE, JOHNS HOPKINS UNIVERSITY, Baltimore, Md.—Dr. Wilford Anderson Hall Councill, Jr., Baltimore, Md.

THE JOHNS HOPKINS HOSPITAL, Baltimore, Md.—Dr. Eugene Augustus Hildreth, Jr., Toledo, Ohio.

UNIVERSITY OF MARYLAND HOSPITAL, Baltimore, Md.—Dr. Richard Allen Neubauer, Wilmington, Del.

UNION MEMORIAL HOSPITAL, Baltimore, Md.—Dr. Mortimer Lee Williams, Roanoke.

VIRGINIA MASON HOSPITAL, Seattle, Wash.—Drs. William Arthur Cover, Elkton; and Morton Callowhill Wilhelm, Roanoke.

EMORY UNIVERSITY HOSPITAL, Atlanta, Ga.—Drs. Waverly Berkley Dashiell, Norfolk; and Joe Elias Mitchell, Charlotte, N. C.

DUKE UNIVERSITY HOSPITAL, Durham, N. C.—Dr. Nathaniel McGregor Ewell, Jr., Charlottesville.

NORTH CAROLINA BAPTIST HOSPITAL, Winston-Salem, N. C.—Dr. Henry Clayton Landon, III, North Wilkesboro, N. C.

WATTS HOSPITAL, Durham, N. C.—Dr. Charles Robert Thompson, Lenoir, N. C.

JEFFERSON-HILLMAN HOSPITAL, Birmingham, Ala.—Drs. Herbert Lyman Findley, Jr., Tuscaloosa, Ala.; William Francis Murphy, Jr., Abbeville, Ala.; and Guy Leslie Rutledge, Jr., Northport, Ala.

UNIVERSITY HOSPITAL, Oklahoma City, Okla.—Dr. William Patton Fite, Jr., Muskogee, Okla.

PRESBYTERIAN HOSPITAL, San Juan, P. R.—Dr. Jaime Higinio Font, Santurce, P. R.

GEORGE WASHINGTON UNIVERSITY HOSPITAL, Washington, D. C.—Dr. Charles Edwin Horton, Vienna.

ST. JOSEPH INFIRMARY, Louisville, Ky.—Dr. William Herbert Howell, Jr., Morgantown, W. Va.

LOUISVILLE GENERAL HOSPITAL, Louisville, Ky.—Dr. John Sheffield Tennant, Newtonville, Mass.

DETROIT CITY RECEIVING HOSPITAL, Detroit, Mich.—Dr. John Jefferson Mahood, Bluefield, W. Va.

PENNSYLVANIA HOSPITAL, Philadelphia, Pa.—Dr. John Houston McClung, Lexington.

THE LANKENAU HOSPITAL, Philadelphia, Pa.—Dr. Charles Theodore Michele, Pulaski.

HOSPITAL OF THE PROTESTANT EPISCOPAL CHURCH, Philadelphia, Pa.—Dr. Benjamin Boisseau Weisiger, III, Richmond.

PHILADELPHIA GENERAL HOSPITAL, Philadelphia. Pa.—Dr. Suzanne Hayward Worrilow, Roanoke.

NORWALK GENERAL HOSPITAL, Norwalk, Conn.—Dr. Rea Parker, Jr., Smithfield.

BETH ISRAEL HOSPITAL, Newark, N. J.—Dr. Edwin Pearlman, Norfolk.

GRADY MEMORIAL HOSPITAL, Atlanta, Ga.—Dr. James Andrew Pettigrew, Ivanhoe.

UNIVERSITY OF MICHIGAN HOSPITAL, Ann Arbor, Mich.—Dr. Clyde Hartwell Ward, Richmond.

JACKSON MEMORIAL HOSPITAL, Miami, Fla.—Dr. Dewey Anderson White, Jr., Birmingham, Ala.

METHODIST HOSPITAL, Indianapolis, Ind.—Dr. James Dwight Whitt, Gate City.

UNITED STATES PUBLIC HEALTH SERVICE—Drs. Richard Littleton Haines, Catskill, N. Y.; and Charles Warren Whitmore, Salem.

Dr. Thomas Henry Alphin, Charlottesville, and Dr. Edgar Coley Garrard, Roanoke, are also members of the graduating class.

MEDICAL COLLEGE OF VIRGINIA

The one hundred tenth commencement exercises of the Medical College of Virginia were held June 14-17, starting with the Student Body Dance on the 14th and ending with the annual reception and dance at the Jefferson Hotel on the last evening. Miss Meta Glass, A.M., Ph.D., Litt.D., LLD., D.C.L., President Emeritus of Sweetbriar College, gave the address at the final exercises on Tuesday evening. The Honorary Degree of Doctor of Science was conferred upon Brigadier General Guy Blair Denit, United States Army, Office of the Surgeon General.

Dr. Robert Quarles Marston, Toano, a member of this graduating class, received the Rhodes Scholarship to Oxford University, England.

Other graduates of the School of Medicine with hospital appointments are:

MEDICAL COLLEGE OF VIRGINIA HOSPITAL, Richmond—Drs. Franklin Lynwood Angell, Roanoke; Howard Olsen Burnette, Richmond; John Abbott Byrd, Parksley; Richard Harding Fisher, Salem; Milton David Friedenberg, Petersburg; Catherine Ann Howard, Hampton; David Josephs, Sanford, N. C.; Berry Judson McClanahan, Richmond; Malcolm Bruce Martin, Richmond; Charles Hymerick Meeks, Arlington; Francis Robert Payne, Jr. Newport; Roy Sherman Temeles, Pittsburgh, Pa.; Enoch W. White, Jr., Jane Lew, W. Va.; and Leah Mildred Williams, Hinton, W. Va.

STUART CIRCLE HOSPITAL, Richmond—Drs. Stuart Thomas Bray, Richmond; and George Edward Calvert, Lynchburg.

JOHNSTON-WILLIS HOSPITAL, Richmond—Drs. Genevieve Marston Garrett, Morgantown, W. Va.; James Power Harnsberger, Richmond; and Jean Ann Wilfong, Richmond.

LEWIS-GALE HOSPITAL, Roanoke—Dr. Noland MacKenzie Canter, Jr., Harrisonburg.

NORFOLK GENERAL HOSPITAL, Norfolk—Drs. Stephen Childrey, Ruther Glen; Douglass Orville Hill, Waynesboro; and Robert Edward Paine, Jr., Roanoke.

DEPAUL HOSPITAL, Norfolk—Dr. William Barrett Pope, Jr., Portsmouth.

UNITED STATES NAVAL HOSPITAL, Portsmouth—Dr. Wayne Wilson Dutton, Chilhowie.

CHARLESTON GENERAL HOSPITAL, Charleston, W. Va.—Drs. John Sommer Blagg, South Charleston, W. Va.; and Jay Emmett Rogers, Jr., Charleston, W. Va.

SAINT MARY'S HOSPITAL, Huntington, W. Va.—Drs. Arthur Allen Carr, War, W. Va.; David Alonzo Haught, Jr., Huntington, W. Va.; and Shelby Edward Jarrell, Packsville, W. Va.

OHIO VALLEY GENERAL HOSPITAL, Wheeling, W. Va.—Drs. Elmond LeMoyne Coffield, Morgantown, W. Va.; Ray Silvio Greco, Fairmont, W. Va.; William Sawyers Herold, Summersville, W. Va.; Frank McDonald Peck, Logan, W. Va.; and James William Peck, Summersville, W. Va.

CITY HOSPITAL, Winston-Salem, N. C.—Dr. Robert Willoughbee Bradley, Sabot.

WATTS HOSPITAL, Durham, N. C.—Dr. Thomas Sidney Cheek, Smithfield, N. C.

CHARLOTTE MEMORIAL HOSPITAL, Charlotte, N. C.—Drs. Harry Clifford Foster, Jr., Clifton Forge; Hampton Hubbard, Charlotte, N. C.; and Philip Lee Allen Minor, Richmond.

VANDERBILT UNIVERSITY HOSPITAL, Nashville, Tenn.—Dr. Charles Whitney Caulkins, Leesburg.

UNION MEMORIAL HOSPITAL, Baltimore, Md.—Dr. Henry Chesley Decker, Richmond.

UNIVERSITY HOSPITAL, Baltimore, Md.—Dr. Benjamin Lewis Jamison, Covington.

UNITED STATES MARINE HOSPITAL, Baltimore, Md.—Drs. William Wayne Quisenberry, Wytheville; and Carl Christopher Tully, Charleston, W. Va.

THE BRONX HOSPITAL, Bronx, N. Y.—Dr. Norman Ende, Petersburg.

QUEENS GENERAL HOSPITAL, Jamaica, L. I., N. Y.—Dr. Seymour Elliott Harris, Richmond.

UNITED STATES MARINE HOSPITAL, Staten Island, N. Y.—Dr. Clem Fitch Burnette, Jr., Richmond.

BOSTON CITY HOSPITAL, Boston, Mass.—Drs. David Jeremiah Harnsberger, Richmond; and Harold Edward Wilkins, Aylett.

UNITED STATES NAVAL HOSPITAL, Chelsea, Mass.—Dr. Earl Raymond Peters, Ft. Blackmore.

BARNES HOSPITAL, St. Louis, Mo.—Dr. Fleming Bates Harper, Richmond.

METHODIST HOSPITAL, Indianapolis, Ind.—Dr. Waldo Cornell Henson, Jr., Charleston, W. Va.

UNIVERSITY HOSPITALS, Iowa City, Iowa.—Dr. John Edward Hill, Richmond.

PHILADELPHIA GENERAL HOSPITAL, Philadelphia, Pa.—Dr. Lawrence Max Howard, Jr., Lynchburg.

MEDICAL CENTER, Pittsburgh, Pa.—Dr. James Alpha Thompson, Clarksburg, W. Va.

MERCY HOSPITAL, Pittsburgh, Pa.—Dr. William Nelson Walker, Jr., Clarksburg, W. Va.

ROBERT PACKER HOSPITAL, Sayre, Pa.—Dr. William Tilden Williams, Beckley, W. Va.

TOURO INFIRMARY, New Orleans, La.—Drs. Jerome Imburg, Richmond; and Walter Stephenson Newman, Jr., Blacksburg.

SOUTHERN BAPTIST HOSPITAL, New Orleans, La.—Dr. Stuart Hinman Light, Huntington, W. Va.

CHARITY HOSPITAL OF LOUISIANA, New Orleans, La.—Dr. George Jeffries Oliver, Jr., Williamsburg.

STATE OF WISCONSIN GENERAL HOSPITAL, Madison, Wis.—Drs. George Richard Krupp, Jersey City, N. J.; and Lloyd Lein Olsen, Bessemer, Mich.

YOUNGSTOWN HOSPITAL, Youngstown, Ohio.—Drs. Louis Amadea Loria, Hepzibah, W. Va.; and

Richard Young Morgan, Beckley, W. Va.

CINCINNATI GENERAL HOSPITAL, Cincinnati, Ohio —Dr. John Wesley Todd, III, Staunton.

CLEVELAND CLINICS, Cleveland, Ohio—Dr. Fred Walls, Jr., Charleston, W. Va.

UNIVERSITY OF CHICAGO CLINICS, Chicago, Ill.— Dr. William West McClure, Richmond.

ROPER HOSPITAL, Charleston, S. C.—Dr. Joseph Walton Milam, Sutherlin.

GOOD SAMARITAN HOSPITAL, Portland, Ore.—Dr. Harold Truman Osterud, Ashland.

HENRY FORD HOSPITAL, Detroit, Mich.—Dr. James Wyatt Phillips, Portsmouth.

JOHN SEALY HOSPITAL, Galveston, Tex.—Dr. Forrest Williford Pitts, Richmond.

MONTREAL GENERAL HOSPITAL, Montreal, Canada —Dr. Wilson Albert Powell, Jr., Norfolk.

COLLIS P. AND HOWARD HUNTINGTON MEMORIAL HOSPITAL, Pasadena, Calif.—Dr. Ralph Sidney Riffenburgh, Blacksburg.

JEFFERSON AND HILLMAN HOSPITALS, Birmingham, Ala.—Dr. Joseph Alpheus Solomon, Arlington.

VIRGINIA MASON HOSPITAL, Seattle, Wash.—Dr. Ernest Randolph Trice, Richmond.

UNIVERSITY HOSPITALS, Oklahoma City, Okla.— Dr. Walter Kinstler Yates, Kenova, W. Va.

Alumni Association, Medical College of Virginia.

Dr. Waverly R. Payne, Newport News, was president and presided at the sessions of the Alumni Association on June 16 and 17. At the closing session, Dr. Harry Lee Claud, Washington, D. C., was installed as president for the coming year, and the following were named to serve with him: President-elect, Dr. Robert J. Wilkinson, Huntington, W. Va.; vice-presidents (one from each school of the College), Dr. Donald S. Daniel, Richmond, for Medicine; Dr. Fred Hale, Raleigh, N. C., for Dentistry; Mr. Roland Scott, Richmond, for Pharmacy; and Mrs. Sabra S. Sadler, Richmond, for Nursing; secretary, Dr. W. Henry Street, Richmond; assistant secretary, Mrs. Helen M. Seller, Richmond; treasurer, Dr. Harvey B. Haag, Richmond. Elected to the Board of Trustees for a term of three years are: Mr. Lloyd C. Bird, Dr. T. Dewey Davis, Dr. G. A. C. Jennings, Dr. Harvey B. Haag (all re-elected), and Mr. Claiborne Robins. All trustees are of Richmond.

Dr. Payne, President, announced that the Association had purchased the old Maury home opposite McGuire Hall to be known as the War Memorial Alumni Building, and also that he had been advised that the President of the Association will hereafter be an ex-officio member of the Board of Visitors of the College and will be given the privilege of discussions on the floor.

Scientific Exhibit.

Standard illuminated viewing boxes for exhibiting x-ray films, or preferably reductions of x-ray films have been purchased and will be available for the Roanoke meeting of the State Society. The Scientific-Exhibit Committee realizes that the difficulty of securing proper viewing equipment has prohibited the demonstration of many worthwhile exhibits, and it is with pleasure that the committee announces this added convenience.

Each box will hold the following films or mounts.

(*Outside dimensions*):

5″ x 7″	—	66
8″ x 10″	—	35
10″ x 12″	—	20

Applications for space should be addressed to Dr. W. Ambrose McGee, Chairman, 1001 West Franklin Street, Richmond 20, Virginia.

Appointments to State Board of Medical Examiners.

Governor Tuck has just announced the following appointments to the Board of Medical Examiners for the State of Virginia for the term of five years ending June 30, 1952:

Dr. Carson L. Fifer, Alexandria (Eighth Congressional District), to succeed himself;

Dr. C. L. Riley, Winchester (Seventh Congressional District), to succeed Dr. P. W. Boyd;

Dr. G. B. Setzler, Pennington Gap (Ninth Congressional District), to succeed Dr. F. H. Smith.

The Board in session in Richmond in June, elected Dr. B. F. Eckles of Galax president to succeed Dr. P. W. Boyd, and Dr. Guy W. Horsley of Richmond vice-president to succeed Dr. F. H. Smith, effective with expiration of the incumbents' Board terms on June 30. Dr. K. D. Graves of Roanoke had previously been named secretary-treasurer.

American Medical Association.

Attendance at the centennial meeting of the Association in Atlantic City in June reached a high peak. The sessions were well attended and the exhibits—scientific and technical—attracted crowds at all times. A number of guests representing foreign countries and organizations attended and were made honorary fellows of the Association. Dr. Henry A. Christian, formerly of Lynchburg, who many years ago cast his lot with Harvard University and is now professor emeritus of medicine at Harvard, was voted by the House of Delegates as the recipient of the Distinguished Service Medal of the Association and was presented with this at the general meeting on the evening of June 10th. At this meeting also, Dr. Edward L. Bortz of Philadelphia succeeded Dr. Harrison H. Shoulders of Nashville, Tenn., as president.

Officers elected to serve with Dr. Bortz are: president-elect, Dr. R. L. Sensenich, South Bend, Ind.; vice-president, Dr. Thomas A. McGoldrick of Brooklyn; and secretary and general manager, Dr. George F. Lull (re-elected), Chicago. In view of lack of accommodations, proper convention hall, etc., the place for the 1948 meeting was changed from St. Louis to Chicago, and the 1949 from New York to Atlantic City. San Francisco was again selected for the 1950 meeting.

Dean Rudd Honored.

Mr. Wortley F. Rudd, retiring dean of the School of Pharmacy, Medical College of Virginia, was honored on the evening of June the 14th by a joint meeting of the Mortar and Pestle Club of the school and the Retail Druggists' Association, at which time he was the recipient of a certificate for a portrait by John Slavin and of an illuminated scroll.

Jefferson Medical College.

Commencement exercises of the College were held at the Academy of Music in Philadelphia, on May 23, at noon. The degree of Doctor of Medicine was conferred upon one hundred and fifty-one students who represented nineteen states.

The commencement address was delivered by Ralph Cooper Hutchison, Ph.D., D.D., LL.D., D.H.L., President of Lafayette College, his subject being "The Professional Man". Jefferson College also conferred upon him the title of Doctor of Law.

Personnel Changes, State Health Department.

Effective July 1, Accomac County has been joined to Northampton County, creating the Accomac-Northampton Health District, with headquarters at Eastville. Dr. J. Walker Jackson will serve as Health Officer.

Effective July 1, Buena Vista has been joined to the Rockbridge-Lexington Health District, creating the Buena Vista-Lexington-Rockbridge Health District, with headquarters at Lexington. Dr. R. B. Blackwell will serve as Health Officer.

Dr. E. M. Holmes, Jr., Director of the Division of Venereal Disease Control, resigned, effective June 1, 1947, to accept position with the Richmond City Health Department.

Annual Registration of Physicians in Indiana.

Effective July 1, 1947, the State of Indiana requires: "That every person who now holds, or may hereafter hold, a valid and unrevoked certificate for a license to practice the Healing Art in any form or manner, granted by the Board of Medical Registration and Examination of Indiana, shall be required to register with said Board, during the month of July and not later than the last day of August, * * * which registration shall be for the period ending June 30, 1948, and shall, annually thereafter, on or before August 31st of each year, be required to register with said Board."

The Indiana State Board of Medical Registration and Examination has requested that we publish this notice as they have Indiana licensees scattered over most of the States.

Dr. Clayton Brantly, Jr.,

Announces the opening of offices for the practice of Internal Medicine at 2 Chambers Street, Danville. He is a member of the class of '40, University of Virginia, Department of Medicine.

Major General Bliss New Surgeon General.

Major General Raymond W. Bliss is the new Surgeon General of the Army, succeeding Major General Norman T. Kirk. His four year term began June 1st. Brig. General George E. Armstrong assumes the duties of Deputy Surgeon General.

Since January 1, 1946, General Bliss has served as Deputy Surgeon General. General Kirk will retire from active duty.

General Bliss was born at Chelsea, Massachusetts, graduated from Tufts College with the degree of Doctor of Medicine, and was commissioned a first lieutenant in the Medical Reserve Corps in September, 1911. Subsequent to World War I, he served as Chief of Surgery at Sternberg General Hospital, Manila, Philippine Islands, at Fort Sam Houston and at William Beaumont General Hospital, El Paso, Texas.

He was a military observer in London from September 1940 to January 1941, and became Surgeon of the First Army and Eastern Defense Command in 1942. He was assigned as Chief of Operations in July 1943 and Assistant Surgeon General August 1944 in the Office of The Surgeon General, Washington, D. C., serving in that capacity until his appointment as Deputy Surgeon General January 1946. He was made Assistant to the Surgeon General with permanent grade of brigadier general in February 1946.

News from University of Virginia, Department of Medicine.

Dr. Edwin Burton, Professor of Ophthalmology, spoke May 19th before the New York Academy of Medicine at its 100th Anniversary Meeting on "Heredodegenerations of the Macula".

The following faculty members were on the program of the meeting of the Federation of American Societies for Experimental Biology in Chicago May 18 to 22:

Dr. William F. Kremer: "Blood Pressure Changes in Response to Electrical and Chemical Stimulation of the Cerebral Cortex."

Dr. E. L. Corey, Associate Professor of Physiology: "Tests on Explosive Decompression."

Dr. S. W. Britton, Professor of Physiology, and Dr. V. A. Pertzoff (by invitation): "Comparative Effects of Positive and Negative Accelerations."

Dr. Stephan Ludewig, Dr. Alfred Chanutin, and Dr. Erland C. Gjessing (by invitation): "Fractionation Studies of the Plasma Proteins of Control and Injured Rats."

Dr. Erland C. Gjessing (by invitation) and Dr. Alfred Chanutin, Professor of Biochemistry: "Fractionation Studies of the Serum Proteins of Control and Injured Goats."

Dr. Chalmers L. Gemmill, Professor of Pharmacology: "Effect of Theobromine Derivatives and Alloxan on Muscle Metabolism." Dr. Gemmill also read a paper on "The Physiological Effects of Exercise on Man at Altitude" at the American Medical Association Meeting in Atlantic City on June 5, 1947.

The American Gynecological Society

Met at Seigniory Club, Quebec, the middle of June. In the absence of the president, Dr. Norris Vaux, Dr. M. Pierce Rucker of Richmond presided and gave the presidential address. Dr. Emil Novak of Baltimore was elected president for the coming year, and Dr. Norman Miller of Ann Arbor and Dr. James R. Miller of Hartford were re-elected secretary and treasurer, respectively. The 1948 meeting will be held at Williamsburg, the latter part of May.

Dr. Moncure Honored.

Dr. P. St. L. Moncure of Norfolk, a former president of the Medical Society of Virginia, was the recipient of an unusual tribute on May 8th, when the staff of the Hospital of St. Vincent de Paul of his city, held a golden jubilee banquet and reception in recognition of his fifty years of service with that institution. In addition to the many expressions of esteem, he was presented with an engraved gold watch and chain.

Married.

Dr. Harry Charles Robelen, Jr., Richmond, and Mrs. Kathleen Cato Stephens, Dumfries, June 1st. He is a graduate of the Medical College of Virginia, class of 1942, and is now a resident physician at Children's Hospital, Washington, D. C.

Dr. Merritt Woodhull Foster, Jr., Williamsburg, and Miss Mary Josephine Nolde, Richmond, May 31st. He is a graduate of the Medical College of Virginia in 1944. They will make their home in Richmond.

Dr. Cecil Cooper Bell, formerly of Lynchburg and a member of the class of '45, Medical College of Virginia, and Miss Mary Ellen Banks, Grantville, Ga., June 1947. They will make their home at Kecoughtan, where Dr. Bell is on the staff of the VA Hospital.

Dr. Walter R. Chitwood,

Wytheville, class of '44, University of Virginia, Department of Medicine, who recently received his discharge from the Army, is now at the Chesapeake and Ohio Hospital, Clifton Forge.

The Virginia Pediatric Society

Held its Spring Clinical meeting at the Medical College of Virginia on June 6th. Twenty-six members and six guests attended. The following program was presented: Impatency of the Naso-Lacrimal Duct by Dr. E. L. Kendig; Practical Aspects of the Rh Factor by Dr. J. H. Scherer; Acrodynia, Report of a Case by Dr. F. N. Mullen, Jr.; Psychiatry in Pediatrics by Dr. P. H. Drewey, Jr.; Tetanus of the Newborn, Report of a Case by Dr. John S. Weitzel; Rheumatic Fever by Dr. Louise Galvin and Dr. Carolyn McCue; Pediatric Survey Report by Dr. J. B. Stone; and Case Reports by the Pediatric Staff of the Medical College of Virginia.

Dr. Paul Hogg, Newport News, is president of this Society and Dr. Louise Galvin, Richmond, secretary.

Medical Society of the State of North Carolina.

For the second time in its history, this Society met outside the State and held its annual meeting at Virginia Beach, May 12-14, under the presidency of Dr. William M. Coppridge of Durham. Dr. Frank Sharpe, Greensboro, was installed as president, and the following officers elected: president-elect, Dr. James F. Robertson, Wilmington; and vice-presidents, Drs. V. K. Hart, Charlotte, and J. G. Raby, Tarboro. Dr. Roscoe D. McMillan, Red Springs, continues as secretary-treasurer.

Dr. Mason Romaine Takes New Post.

Dr. Romaine has resigned as public health director of Petersburg and, effective July 1st accepted the position as director of the division of cancer control of the State Health Department. He was the first full-time public health officer in Petersburg, being appointed in 1941, after having been associated with the department since 1922. Dr. Romaine's office will be in Richmond but he will maintain his home in Petersburg.

Dr. George N. Thrift,

Richmond, has been named a diplomate of the American Board of Otolaryngology.

Dr. Henkel M. Price,

After completing special work at the North Carolina Baptist Hospital at Winston-Salem, has returned to Martinsville, where he will limit his practice to the field of radiology.

Dr. Julian Q. Early,

Who has been practicing at Dante since his release from the Navy, has entered upon a fellowship in cardiology at the University of Virginia under Dr. J. Edwin Wood. Dr. Early graduated from the University in the class of December 1943.

Dr. Percy G. Hamlin,

For many years a member of the Medical Society of Virginia and a Lieutenant Colonel in the Medical Corps, AUS, until January 1946, was one of the associates of the American College of Physicians elected to Fellowship in the College at its recent meeting in Chicago. Dr. Hamlin is now making his home and practicing in Santa Barbara, California.

President of Harvard Club.

Dr. Sidney S. Negus of Richmond was elected president of the Harvard Club of Virginia at its annual dinner meeting on May 28th. Dr. Lee E. Sutton, also of Richmond, was elected a member of the executive committee.

Dr. William T. Pugh,

Lynchburg, has been reappointed by Governor Tuck as a member of the State Commission of Game and Inland Fisheries for a new term of six years, beginning July 1.

Postgraduate Course in Cardiology.

There will be a two-week course in Cardiology given at the Medical College of Virginia, September 8-20, 1947. The tentative program is given below. Tuition for the course is $50.00. Inquiries should be addressed to The Department of Continuation Education, Box 94, Medical College of Virginia, Richmond 19, Virginia.

MONDAY	
9:00-10:00	Registration and Introductory Remarks
10:00-11:00	Electrocardiogram Quiz
11:00-12:00	Physiologic basis of E. C. G.
12:00- 1:00	Anatomy of heart
2:00- 4:00	Demonstration of cases
4:00- 5:00	Physiology of the circulation
TUESDAY	
9:00-10:00	Pathological Physiology and Congestive Failure
10:00-12:00	Electrocardiography
12:00- 1:00	Special Procedures and Tests
2:00- 4:00	Demonstration of cases
4:00- 5:00	Treatment of Congestive Failure
WEDNESDAY	
9:00-10:00	Treatment of Congestive Failure
10:00-12:00	Electrocardiography
12:00- 1:00	Pathology Demonstration
2:00- 4:00	Demonstration of cases

4:00- 5:00	Evaluation of signs and symptoms
THURSDAY	
9:00-10:00	Cardiac arrhythmias
10:00-12:00	Electrocardiography
12:00- 1:00	Cardiac x-rays
2:00- 4:00	Demonstration of cases
4:00- 5:00	Congenital Heart Diseases
FRIDAY	
9:00-10:00	Rheumatic Fever and Rheumatic Heart Disease
10:00-12:00	Electrocardiography
12:00- 1:00	Pathology Demonstration
2:00- 4:00	Demonstration of cases
4:00- 5:00	Hypertension
SATURDAY	
9:00-10:00	Coronary
10:00-12:00	Electrocardiography
MONDAY	
9:00-10:00	Bacterial Endocarditis
10:00-12:00	Electrocardiography
12:00- 1:00	Pathology Demonstration
2:00- 4:00	Demonstration of cases
4:00- 5:00	Pulmonary Heart Disease
TUESDAY	
9:00-10:00	Diseases of the Pericardium
10:00-12:00	Electrocardiography
12:00 -1:00	Cardiac x-rays
2:00- 4:00	Demonstration of cases
4:00- 5:00	Functional Cardiovascular Diseases
WEDNESDAY	
9:00-10:00	Miscellaneous Heart Diseases
10:00-12:00	Electrocardiography
12:00- 1:00	Cardiac Fluoroscopy
2:00- 4:00	Demonstration of cases
4:00- 5:00	The Heart in Pregnancy and Operations
THURSDAY	
9:00-10:00	Surgery of the heart and vessels
10:00-12:00	Electrocardiography
12:00- 1:00	Cardiac Fluoroscopy
2:00- 4:00	Demonstration of cases
4:00- 5:00	Vascular Diseases
FRIDAY	
9:00-10:00	Vascular Diseases
10:00-12:00	Electrocardiography
12:00- 1:00	
2:00- 4:00	Demonstration of cases
4:00- 5:00	Vascular Diseases
SATURDAY	
9:00-12:00	Resume and Question Period

Physicians Medical Laboratory.

Since the approved list of laboratories has been published for the year, Dr. William J. Frohbose, Consultant, Division of Venereal Disease Control, announces that Dr. V. J. Dardinski's laboratory, known as "Physicians Medical Laboratory", has been granted temporary approval, pending the new evaluation study in November 1947. This laboratory was opened June 1, 1947 and is located at 1228 North Irving Street, Arlington, Virginia.

For Sale—

1 Autoclave
1 Basin Sterilizer
1 Operating Table
1 X-Ray Machine

All suitable for a small hospital or clinic. Address Lebanon General Hospital, Lebanon, Va. (*Adv.*)

Wanted—

A resident or associate in Group practice. Write Dr. A. M. Showalter, Christiansburg, Va. (*Adv.*)

Wanted—

Resident physician, Grade A School. Room, board, uniforms, laundry, and $100.00 monthly. Address Miss N. J. Curtis, Superintendent, Sheltering Arms Hospital, 1008 East Clay Street, Richmond 19, Va. (*Adv.*)

Wanted—

Resident physician for small hospital, also laboratory and X-ray technician. Apply Clinchfield Hospital Medical Department, Dante, Va. (*Adv.*)

Wanted—

Young doctor for junior partner; country practice; good salary plus commission. Address "Doctor" care this journal, 1200 East Clay Street, Richmond 19. (*Adv.*)

For Sale—

Physician's home in rural and mountainous area, in community of 2,800. Practice includes industrial, agricultural, and tourist and resort groups. Adequate hospital facility in town, and easy access to larger centers. Well equipped offices, centrally located, available for rent, with or without purchase of equipment. Will introduce purchaser of home to practice. Reply "Doctor's Home", care this journal, 1200 East Clay Street, Richmond 19. (*Adv.*)

For Sale—

One (1) operating room table with complete equipment of stainless steel, good as new;

One (1) nitrous oxide oxygen gas outfit, put up by McKesson Appliance Company, model 620.

Address New Altamont Hospital, Christiansburg, Va. (*Adv.*)

OBITUARIES

Dr. Alfred D. Henkel,

One of the oldest physicians in the State, died at his home in Winchester on May 27th, after an illness of six months. He was eighty-six years of age and a graduate in medicine from the University of Pennsylvania in 1887. He had been a member of the Medical Society of Virginia since 1905 and was for many years a member of the Winchester School Board. He is survived by two children and several sisters.

Dr. Jesse Hill Crouch,

Director of public health for Henrico County, died June 13 after a short illness. He was a native of Richmond and sixty years of age. He graduated from the Medical College of Virginia in 1911, and he practiced in Richmond for a short time before entering public health work. Soon thereafter he took his degree of D.P.H. at Johns Hopkins. After service in several other locations, he returned to Virginia in 1939 and accepted the position as director of public health for Henrico County which he held to the time of his death. He held membership in several medical organizations and was prominent in Masonic circles. His wife and two brothers survive him.

Dr. Oscar Hunter McClung,

Lexington, died of coronary thrombosis on February 2nd. He was sixty-seven years of age and a graduate from the University of Virginia, Department of Medicine, in 1902. He was a member of the staff of the Jackson Memorial Hospital in Lexington, and had been a member of the Medical Society of Virginia since 1903.

Resolutions on Dr. Burton.

The Alleghany-Bath County Medical Society, at a recent meeting, drew up the following resolutions on the death of Dr. William Preston Burton:

On December 17, 1946, at its regular meeting the Alleghany-Bath County Medical Society issued a unanimous expression of deep regret at the untimely death of its former member, Dr. W. P. Burton, of Covington, Virginia.

Dr. Burton's death was an acute and irreparable loss to his family, to the medical profession, to his patients, and to the welfare of his immediate community.

It is the desire of the Society that a copy of this expression of sympathy be conveyed to his family, and that a copy be sent to the Medical Society of Virginia for publication in the VIRGINIA MEDICAL MONTHLY.

R. P. HAWKINS, JR.
H. G. HUDNALL
G. A. TORRENCE
Committee.

Dr. Harry Burgwyn Baker,

Richmond, practicing homeopathic physician for more than forty-five years, died June 14th. He was seventy-eight years of age and a graduate of the former University College of Medicine, Richmond, in 1900.

Sir Almroth Edward Wright,

One of Great Britain's famous and most highly honored physicians, died at his home at Farnham, Buckinghamshire, April 30, aged 85.

He was educated in liberal arts in Dublin University and completed his education at the University of Leipsig, Strasburg and Marburg. His professional life was spent as principal of the Institute of Pathology in St. Mary's Hospital, London, where he made his great contributions to medical science. As early as 1896 he developed a method of preparing the serum for anti-typhoid inoculation. His method gained international acceptance after he had arranged for its use for British troops in 1914-1919 when he served as consulting physician to the British Expeditionary Force in France.

As professor of pathology in the Royal Army's medical school at Netley in the years just previous to the Boer War, he discovered that typhoid bacilli which had been killed by heating could be introduced into the patient's blood, rendering him immune or able to withstand a severe case of typhoid. For this work he was knighted in 1906 and in World War I he was made a Companion of the Bath and a Knight of the British Empire.

Sir Almroth was honored by many foreign societies.

GUY HINSDALE, M.D.,
Charlottesville, Va.

The UG-PG 20

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- Additional benefits, $200.00 per month for nurses care at home.
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THE N.Y. ACADEMY OF MEDICINE
AUG 13 1947
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Virginia MEDICAL MONTHLY

OFFICIAL PUBLICATION OF THE MEDICAL SOCIETY OF VIRGINIA

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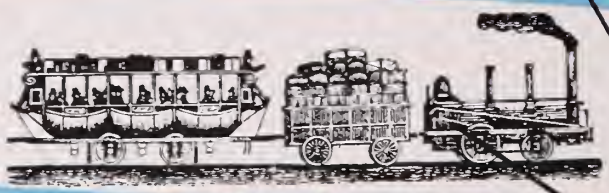
Annual Meeting
Medical Society of Virginia
Roanoke, October 13-15, 1947

August 1947

#8

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Virginia Medical Monthly

Vol. 74, No. 8.
WHOLE No. 1142.

RICHMOND, VA., AUGUST, 1947

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GUEST EDITORIAL

Post War Medical Education

AS WE strive to solve our professional problems in the present reconstruction period, we are forcibly reminded that wars have always had a profound influence upon the development of medical science, often advancing and often impeding its progress. The battlefield has been a training ground for traumatic surgeons and the army camp for the study of public health. At times, wars have brought undying fame to military surgeons as well as to military leaders. Ambroise Paré (1510-90), a rustic barber surgeon's apprentice from the French provinces, joined the armed forces after only three years of practical experience as a resident "dresser" in the Hotel Dieu. For thirty years thereafter he served under four kings of France in many strenuous campaigns. Through keen observation, shrewd judgment, and enormous energy, he met the problems of a military doctor with honor and success and finally gained formal recognition from the French medical profession. Ultimately he became the most celebrated and most productive surgeon of the Renaissance. He has rightly been called "one of the master surgeons of history", and "the father of modern surgery".

During our American Revolution, our first medical schools, very recently established, were forced to close. After the war, however, they grew with renewed vigor as our own enthusiastic young students trained in the institutions of higher medical learning of France, Holland, England, and Scotland, returned in increasing numbers to reestablish our medical schools and to personally guide and inspire our younger men. During the remainder of the eighteenth and the first half of the nineteenth century our medical schools and hospitals increased rapidly in numbers and importance. In these pioneer years, however, coordinated effort for scientific advancement was difficult because of our relatively small and widely scattered population. In spite of many handicaps, however, numerous outstanding individual contributions to medical science were made by such men as Ephraim McDowell, Daniel Drake, William Beaumont, Oliver Wendell Holmes, Samuel D. Gross, and a great many others.

Immediately following the war between the states, the progress of medical education in our country was at an extremely low ebb. The year 1870, nevertheless, marks the beginning of a new and more modern era in America medical education. We made more rapid progress after that date and by 1890 medical schools of a higher type, comparable to the best of those abroad, had been established in some "five or six" of our endowed universities. These schools were the nucleus of our present system of advanced medical training. They supplied the well trained teachers and the medical leaders with a full understanding of the requirements of modern higher medical education whose help and inspiration were so much needed at that critical period.

In 1910 the Flexner report appeared and our Council on Medical Education published its first classification of medical schools and its standards for an acceptable school. The events which quickly followed resulted in the elimination of our less

efficient institutions, brought to an end the era of the proprietary medical schools, and cleared the way for the rapid advancement in scientific medicine which came after World War I.

A number of elements contributed greatly to the rapid progress of our profession in the important years which followed 1918. The first of these was our industrial revolution which, starting early in the nineteenth century, reached its culmination at the turn of the twentieth century and furnished both the inspiration and the financial support for many forms of social improvement, including medical education. A second element was the vitalizing influences of scientific research which permeated every phase of American life and was nowhere more intensely active than in American medicine. Still a third element was the rapid growth of specialism in our profession which enlisted the enthusiastic efforts of large numbers of well trained minds in the intensive study of every division of medicine and yielded a rich harvest of technological advancements in medical science and gratifying improvements in clinical practice. Specialism in modern American medicine, while not without many faults and many weaknesses, has, nevertheless, been a very important element in our medical progress.

During World War II there was intense activity in the study of basic educational methods in almost all of our colleges and universities and many new changes have been made in their post-war curriculums. Our medical educators have likewise been deeply interested in improving and modernizing our medical school curriculum and in developing and extending our system of graduate training in all divisions of medicine. The growing magnitude of the great mass of medical knowledge is making necessary an earnest search for ways and means by which our students may procure a well rounded and properly integrated and correlated professional education during their medical school years.

Formerly the study of anatomy, physiology, biochemistry, and pharmacology occupied most of the student's time in the first two years in medicine. These subjects were taught as independent branches of medical science and too little attention was given to their practical application. At present, less time is devoted to these basic subjects in the preclinical years and more time later in the curriculum to their application in clinical medicine and surgery. Where possible, this phase of the instruction is now imparted by teachers experienced in clinical work rather than by technical specialists in these branches.

Some professional medical educators believe that our students would receive a better training for medical practice if, instead of presenting each major division of medicine as a separate, independent branch of medical science, we were to treat the whole field of medicine as a composite whole, fitting each branch of medicine or each specialty into the picture as it may be useful in the overall understanding of clinical medicine and surgery. They would accomplish this by having the entire four years of the medical school curriculum made up of well integrated and correlated courses, with each course carefully planned and presented by the combined efforts of teachers from all departments of the school.

Gradually in recent years clinical instruction has been started earlier in the medical school curriculum. The contact between teacher and student has become more intimate. The old lecture-ship system is slowly being replaced by a plan in which the student is an important and a responsible member of a small group in charge of the study and treatment of clinical cases. Visual methods, even including television, are also rapidly assuming a more important place in our system of education.

The rapid progress in modern scientific medicine with the resulting large accumulation of practical clinical knowledge has been chiefly responsible for the recent developments in medical education. Changes have been made not only that we might continue to make further advancement through scientific research but also that we might make fuller use of our new knowledge in the treatment of clinical cases. Let us hope that these changes will be helpful in the medical school curriculum and in the graduate training program for the recognized specialities but most of all in the furtherance of more active efforts for the better training of the general practitioner who seems to be the "forgotten man" in this age of specialism.

As the medical school curriculum has become more complicated, it has been necessary for our students to acquire a greater part of their practical clinical experience and their more advanced medical and surgical training during their intern and residency years. At the same time it has become increasingly difficult for our medical schools and our university hospitals to provide the large amount of clinical material and the practical experience necessary for the training of the rapidly increasing number of men who must have this advanced type of medical education. Our independent hospitals, widely scattered throughout our country, would alone seem to have the facilities to undertake this added responsibility. They have, for years, performed a part of this task with varying degrees of efficiency and it now appears necessary that they assume a greater share of this work. This is an important challenge to our independent hospitals and to their staffs. It has always been the custom of our profession, however, to aid in the training of our younger men. We have each, in our turn, received helpful instruction from our elders. This obligation to our youth is a time honored tradition among medical men. It has even come down to us through more than twenty-three centuries in the oath of Hypocrates. It is a tradition, moreover, which we must not neglect at this time if the progress of higher medical education is to be maintained in our generation and if we are to meet the insistent and growing demand of our people for more and better medical care.

In comparison with the tribulations of the medical professions in other lands we in America have suffered little during the recent war. In fact, in many ways, we have made definite advancements. This should make us keenly aware of our responsibility in maintaining the progress of medicine in this post-war era. Our medical educational institutions and our profession are well developed and with good leadership and the backing of the American people will be able to meet the task before us. Our younger medical men have shown their worth by rendering efficient and honorable service to their country in the armed forces and are now eagerly and intelligently preparing themselves for leadership in our profession in their generation. Certainly after no war in our history has the stage been more favorably set for the rapid advancement of medical science, medical education, and medical practice in America.

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EDITOR'S NOTE: Dr. Smead is a past President of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, and is a keen student of medical history.

TREATMENT OF BURNS*

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While the management and treatment of patients with severe burns still remains one of the most controversial subjects in the entire field of surgery, nevertheless, it can be safely said that there has been more progress in both the local and general treatment of burns during the past decade than there has been in any previous decade in history. World War II was an important factor in stimulating further investigation and research in the management of burns.

The mortality rate from burns is still far too high and a discussion of burns should be presented to the profession more often.

In the local treatment of burns there have been two significant accomplishments in the past few years. First and most outstanding: The occlusive compression treatment of burns as developed by Allen and Koch of Chicago, and Siler and associates of Cincinnati; second: Sulfanilamide ointment as developed by E. I. Evans and associates at the Medical College of Virginia, and certain other sulfonamide ointments with fatty bases so that the sulfonamide is slowly absorbed. In the general treatment of burns, the greatest progress has been in obtaining a better knowledge of the physiological and pathological changes which take place, combating hemoconcentration with plasma, giving transfusions of blood, administering adequate electrolytes and fluids before irreversible metabolic changes take place: giving a high protein, high vitamin diet, and performing split-thickness skin grafts early.

Severe burns are surgical emergencies, and they require the services of a team trained in the treatment of burns in order to obtain the best results. Severe burns often present the most difficult of surgical problems, particularly from the standpoint of general treatment. In severe burns there are many physiological and pathological changes taking place, and although there are certain methods of estimating the fluid requirements, it is necessary to individualize each patient in regard to the general treatment.

By severe burns we mean those patients who have a considerable part of the body surface burned. Of course, there are other factors in addition to the extent of the body surface burned which may profoundly influence the seriousness of the condition, namely, *The depth of the burn, the age of the patient, the general condition and nutrition of the patient, the time elapsing between the burn and the institution of adequate treatment and the causes of the burns. Usually any patient with as much as 15-20 per cent of the body surface involved with second or third degree burns presents a rather serious surgical problem. This is particularly true if the patient is debilitated and all four extremities are burned in locations where intravenous fluids are given.*

Berkow's method of determining the extent of the body surface burned is a satisfactory method of approximating the extent of the burn, but where a more exact percentage is desired and particularly in children, Lund and Browder's modification† of Berkow's method would be preferable.

Lund and Browder's modification of Berkow's method for determining the extent of the body surface burned in adults is as follows:

Head	7
Neck	2
	9
Anterior trunk	13
Posterior trunk	13
Buttocks	5
Genitalia	1
	32
Upper arms	8
Forearms	6
Hands	5
	19
Thighs	19
Legs	14
Feet	7
	40

The treatment of burns is divided into the Local Treatment and the General Treatment.

*Read before the Medical Society of Virginia, at Virginia Beach, October 15, 1946.
Read before the Seaboard Medical Association of Virginia and North Carolina, December 3-5, 1946.

†Lund, Charles C., and Browder, Newton C., *S. G. & O.*, October, 1944, vol. 79, No. 4, pp. 352-358.

The Local Treatment of Burns is divided as follows:

1. The Agents and Dressings applied to the burned areas.
2. The Early Plastic Treatment.
3. The Late Plastic Treatment.

The General Treatment of Burns is divided as follows:

1. Early General Treatment, during shock or the potential shock period.
2. Intermediate General Treatment.
3. Late General Treatment.

LOCAL TREATMENT

Whether debridement will be carried out, or not, will depend to a great extent upon the local treatment to be applied and upon the general condition of the patient. When modified M.C.V. ointment (or M.C.V. ointment) and compression are used locally, the need for debridement is practically eliminated. On the other hand, if vaseline gauze and compression are used locally and if the patient's general condition justifies it, then limited debridement may be indicated, as infection is more likely to occur with that method of local treatment.

Most surgeons of experience in the treatment of burns will now agree that extensive debridement in severe burns is not only unnecessary, but it may be extremely dangerous. Extensive debridement may be an important factor in producing shock, or by further increasing shock, if it is already present. The belief that extensive debridement is necessary in these early burns in order to avoid severe infections has been proven to be incorrect, if the local method to be described has been employed. However, *in neglected second degree burns and in extensive third degree burns, infection may be a very real problem.* If we were treating only the local wound, then debridement under anesthesia in certain cases would be the proper surgical procedure. In severe burns we are dealing with critically ill patients, and anything that would be an important factor in producing shock or delay unnecessarily the treatment to correct the abnormal physiology, would many times offset any benefits that might result from debridement. The practice of giving these critically ill patients an anesthetic is to be condemned. We do not use soap and water for cleansing these wounds. If the general condition of the patient is satisfactory, we do excise partly detached and devitalized tissue, and gently remove gross loose dirt with cotton balls soaked in saline. *We never open blebs at the time of the original dressing. It is most important to treat these patients as surgical emergencies, promptly carrying out the local and early general treatments simultaneously.* In severe burns if there is delay in carrying out the local treatment, the patient may become shocked and the longer the delay, the greater the possibility of infection. If there is delay in carrying out the early general treatment shock may rapidly ensue, or if already present it may progress until irreversible changes take place.

The surgeons and nurses engaged in carrying out these treatments should wear caps, masks, sterile gloves and gowns, and *they should observe a sterile technique throughout the procedures.* Proper masking of the patient, and those engaged in carrying out the local treatments is most important. *If these principles are not observed, infections will be increased.*

A modification of M.C.V. ointment (or M.C.V. ointment) with adequate occlusive pressure dressing is the local treatment of choice. M.C.V. ointment is somewhat soft in this climate; therefore, it has been modified simply to make it of greater consistency with the therapeutic value of the ointment remaining essentially the same.

Modified M.C.V. ointment is as follows:

Sulfanilamide (finely powdered)	6%
Peanut Oil	8%
Cold Cream	43%
Lanolin	43%

NOTE: Beeswax or white wax ¼—1% (replacing an equivalent amount of cold cream) is added in warm weather or whenever the ointment is to be kept in a warm place.

Using an aseptic technique, the local treatment is applied as follows:

1. Modified M.C.V. ointment (or M.C.V. ointment) is thickly applied to the entire burned area and to an inch or more of the adjacent unburned skin. Where there are large areas of third degree burns with considerable exudate, the ointment does not adhere satisfactorily; therefore, for those areas it is advisable to have the ointment already prepared on wide pieces of gauze in order to expedite the dressings.
2. Apply a thick layer of "fluffs" or of "ripple" gauze.

3. Apply one or two layers of large and thick combines (Curity).
4. Apply a wide elastic bandage.

We frequently use a stockinet in addition to the elastic bandage. When the patient is uncooperative, there is often difficulty in keeping the dressing on the body, in which event we may also use a many-tailed binder.

To obtain adequate compression without constriction or tourniquet effect, it is necessary to have a thick and "fluffy" dressing. *Constriction or tourniquet effect must be avoided.* As has been pointed out by many authors previously, in bandaging an extremity the pressure must be greater distally.

Frequent dressings should be avoided. Frequent dressings mean delayed healing and greater possibility of infection. Infection may convert a second degree burn into a third degree burn.

This type of dressing with modified M.C.V. ointment (or M.C.V. ointment) has a quick analgesic effect. Burned patients treated with this method remain unusually comfortable, and the need for sedatives and opiates is very much reduced.

There is slow absorption of the sulfanilamide from the ointment and the blood concentration even in very extensive burns remains very low; therefore, it is not necessary to determine sulfanilamide blood levels. On the other hand, sulfonamides should not be given by other routes. It is often surprising how much healing will have taken place at the time of the first change of dressing, whereas, with many other methods of local treatment, it is not uncommon to find areas which originally were of second degree, converted into third degree burns. As is well known, the deeper the burn the greater the possibility of infection. *It is not advisable to use this ointment longer than three weeks.* If for any reason the preparation of the deep burns for skin grafting can not be started at that time, some other method of local treatment without sulfonamides should be substituted. In late burns which are badly infected, we do not necessarily advocate this local method of treatment; in fact, we know of no method which is satisfactory in those cases. However, we have used this method in a number of late and badly infected cases and the results have been much better than anticipated, but those cases should be individualized.

Many surgeons believe that vaseline gauze with compression, and sulfonamides orally or intravenously will accomplish the same results as the method just described, because the sulfonamide concentration in the plasma in the burn blebs is about the same as in the blood. There are two reasons why modified M.C.V. ointment (or M.C.V. ointment) with compression will give better results. First, an important fact, the ointment places the sulfanilamide in direct contact with devitalized tissues that can not be reached by the blood. This fact, we believe, accounts for the low incidence of infections with this local method of treatment. Second, the dressing can be removed without producing bleeding of importance from the burned surface, as this ointment leaves a thin film adherent to the burned area. It is difficult to remove vaseline gauze from a deep burn without producing bleeding and therefore damage to the burned tissue.

To use modified M.C.V. ointment (or M.C.V. ointment) with compression is to be impressed with its efficacy.

2. The Early Plastic Treatment of Burns. Deep burns should be grafted just as soon as the burned area can be gotten into a healthy condition. This often takes as long as two or three weeks, and may take longer, due to the slow separation of the slough. We, personally, prefer dermatome split-thickness (thin) grafts of about 0.010 or 0.012 of an inch. The thin grafts take more readily than the thicker ones. Under the most favorable conditions, about 90-95 per cent of split-thickness grafts should take. Pinch grafts are occasionally indicated in extensive burns but we usually prefer not to use them if split thickness grafts can be obtained. The most important principle is to get the granulating surface covered, creating a closed wound with its beneficial effects and thereby avoid deep scars and contractures. *Early and proper splinting of joints is of decided importance in preventing contractures.* Each surgeon usually has his own particular method of attaching the graft and of applying a dressing to it, but regardless of his method, there are two fundamentals that should be observed: first, the graft should not be applied under tension; second, the graft should be securely attached and then dressed so that it will remain still.

3. The Late Plastic Treatment of Burns. The late plastic treatment of burns is concerned with the correction of contractures, skin defects and deformities, or perhaps with the removing of thin grafts which were applied simply to cover a granu-

lating surface. Therefore, grafts used here must be considerably thicker than would be used in the early plastic treatment of burns. These grafts must be of sufficient thickness not only to protect the underlying structures, but they should serve the functions of essentially normal skin. Ordinarily, we prefer split-thickness grafts of about 0.020 of an inch or slightly more in thickness. Occasionally we use pinch-grafts to cover small areas, but they have a limited field of usefulness. In the case of certain contractures and scars, the Z plastic and releasing incisions are extremely useful procedures. In some instances, a pedicle graft will be necessary to obtain satisfactory results. The fundamentals of securely attaching the graft, of keeping it still, and of not placing it under tension apply to the late plastic treatment of burns as they do to the early plastic treatment. After controlling oozing from the donor sites, the sites should be dressed the same as a burned area, with modified M.C.V. ointment (or M.C.V. ointment) and occlusive pressure dressings. *It is essential to keep the patient in a good nutritional state during all phases of plastic surgery; otherwise, failures are likely to result.*

General Treatment of Burns

1. *Early General Treatment of Burns. There must be no delay in carrying out the early general treatment.* It should be started within a few minutes after the patient reaches the Emergency Room, and carried out simultaneously with the local treatment. When these patients are first seen they complain of pains, are thirsty, and are shaking as though they were having a chill. The more severe cases are given morphia gr. ¼ on admission. Tetanus antitoxin is always given at the time of admission, and gas-gangrene antitoxin is also given to some cases depending upon the condition and depth of the burns.

These patients are carefully observed for signs and symptoms of impending shock before the blood pressure begins to fall. The blood pressure and pulse are recorded every half hour for the first 24 hours or until the danger of shock has passed.

When laboratory facilities and personnel are adequate, blood should be collected immediately for determination of *blood volume,* the hematocrit, hemoglobin, R. B. C., sp. gr. of the blood and plasma, plasma proteins, blood chlorides and carbon dioxide combining power of the blood. In the most serious cases these laboratory procedures and urinalysis should be repeated one or more times daily during the first 48-72 hours in order to satisfactorily carry out the fluid therapy. The Rh factor should be determined before repeated transfusions of blood are given. Other indicated laboratory procedures are N.P.N., prothrombin level and icterus index.

The method of local treatment which has been described can be carried out with minimal laboratory procedures. *When laboratory facilities and personnel are very limited, as they frequently are, and particularly in the smaller hospitals, the hematocrit, hemoglobin, R.B.C., plasma proteins and the urinary output in addition to the clinical condition of the patient can serve as a good guide to fluid therapy.*

Plasma is indicated in the treatment of all severe burns. It serves its main usefulness during the first 72 hours, provided it is given early and in adequate amounts. There are a number of different methods for determining the required amount of plasma, but either of the following methods will usually be found satisfactory:

1. Give 50-75 c.c. of plasma for each per cent of the body surface involved in a blistering or deep burn. (This method is usually preferred, especially if the patient is seen early, as the hematocrit may still be normal.)
2. Give 100 c.c. of plasma for each point the hematocrit exceeds the normal of 45 (Harkins).

The amount of plasma to be given during the second 24 hours will usually be considerably less than that given the first 24 hours, often about one-third or one-half. During the third 24 hours, the amount of plasma will usually be about 25 per cent of that given during the first 24 hours, provided it is still indicated. The amount of plasma should be varied according to the clinical condition of the patient, the hematocrit and other laboratory findings.

In all severe burns, plasma should be started within a few minutes after the patient reaches the Emergency Room, performing phlebotomy if necessary. In cases of acute collapse, phlebotomy (using the long saphenous vein) even as high as the fossa ovalis may be necessary. Some prefer femoral venipuncture instead. *In the presence of shock, plasma must be given rapidly. Do not wait until the blood pressure begins to fall before giving plasma and instituting adequate general treatment.* Even if the patients do not present symptoms of shock when

first seen, the surgeon of experience in the treatment of these cases, and with a knowledge of the changing physiology that is taking place, will realize that they are potential cases for shock, and he will act fast to carry out both the local and early general treatments. In order to avoid difficulties in the management of these cases, it is necessary to comprehend the seriousness of the condition and understand that profound physiological changes are taking place before the blood pressure begins to fall.

SHOCK

Primary shock occurs from vasomotor reaction, caused by pains, injury, etc. It develops promptly, while true shock or secondary shock develops slowly. In severe burns primary shock may merge into secondary shock. There is little capillary permeability in primary shock as it does not produce hemoconcentration.

Secondary shock seldom occurs under 3 or 4 hours, except in severe injuries. In the early stages of severe burns there is often no fall of arterial blood pressure. Even before there is any fall of blood pressure or evidence of beginning circulatory failure, the incipient stage of true shock may be detected by slight hemoconcentration. The findings of hemoconcentration in the early stages will serve to differentiate this condition from either hemorrhage (with hemodilution) or from primary shock. Whenever possible, the best treatment of shock is prevention. Venous tourniquet tests may aid in detecting incipient traumatic shock.

Falling plasma proteins and progressive hemoconcentration usually indicate impending shock, even though the blood pressure may still be normal. If the urinary output is good during the early phase, shock is not so likely to be impending. Incipient shock is accompanied by a diminished urinary output.

Shock should be anticipated in any patient with as much as 25 per cent of the body surface involved in second or third degree burns. Therefore, immediate steps should be taken to prevent it. Shock may occur in children or debilitated individuals with as little as 10 per cent of the body surface involved in a deep burn. *Oxygen is indicated in the treatment of shock.*

Transfusions of blood are indicated in this early period, if the hematocrit is below 60, giving about one-half of the amount of plasma administered. Transfusions of blood may be given instead of plasma to prevent or combat shock, but at the same time electrolyte solutions should be given, preferably by mouth. The anemias, which frequently occur in the intermediate period, are not so common when blood transfusions are given in the early period. *Blood transfusions are always indicated in extensive and deep burns, particularly after the third day.* When anemia and hypoproteinemia occur, there should be no delay in giving frequent blood transfusions.

From a practical standpoint the urinary output is a good guide to the adequacy of the fluid intake. Enough fluids should be given to maintain a urinary output of at least 1500 c.c. daily. Too much emphasis can not be placed upon keeping a correct record of the intake and output. *Every effort should be made to encourage the patient to take an adequate amount of fluids and electrolytes by mouth.* In those cases when this can not be accomplished, the fluids and electrolytes could be given through a duodenal tube, provided there is no vomiting or other contraindications. When vomiting is present, electrolyte solutions should be given intravenously.

If the patient is able to take a diet during this early period, it should be soft and consist of a high caloric, high protein (200 to 400 grams daily) diet, with adequate amounts of vitamins, particularly vitamin C and vitamin B complex. If the patient can not tolerate a diet of sufficient proteins, then amino-acids parenterally should be supplemented.

Penicillin probably plays a very important part in controlling infection. It is started early and continued until the temperature is essentially normal. However, before penicillin was available, we obtained good results with the method outlined.

Whenever cultures or smears from the burned area show organisms susceptible to streptomycin, it should be employed. From a limited experience streptomycin appears to be of definite value in infections due to pyocyaneus or proteus organisms.

While there are still divergent opinions regarding the value of adrenal cortex extracts in the treatment of burns, nevertheless, from the evidences of toxic atrophy of the adrenals found at times on histo-pathological examination, it is believed that they may be of some value in severe cases.

2 and 3. *Intermediate and Late General Treatments.* The intermediate general treatment and the

late general treatment will be described together as they are the same, except there will often be more urgency in carrying the intermediate general treatment.

Enough emphasis has not been placed upon an adequate nutrition in the treatment of burns. Regardless of the local method employed, satisfactory healing will not be obtained if the patient continues in a poor state of nutrition.

The diet listed under the early general treatment should be continued during the intermediate and late periods. Most diets during these periods of healing are too low in proteins and vitamins. The patient should be encouraged to take the full diet, as that is the most effective way to maintain a satisfactory nutrition, along with frequent blood transfusions. *These are the periods during which blood transfusions are particularly indicated.* Liver parenterally, and iron are usually indicated in severe cases. During these stages at least weekly determinations of the hematocrit, plasma proteins, R.B.C., hemoglobin and blood chlorides will be necessary.

Toxemia. Toxemia is always a factor in very extensive deep burns and, while it does occur in the early stages before infection of consequence has had time to take place, it is always increased by infection. If the burn is not too deep and extensive, and the patient is seen early and treated adequately by the method outlined, then toxemia is not ordinarily a great factor. When patients are seen late, toxemia may be difficult to combat. When these patients develop high fever, it should be treated promptly and energetically, as they can not tolerate high fever for long periods.

CONCLUSIONS

1. Burns are surgical emergencies. Both the local and early general treatments should be carried out promptly and simultaneously.
2. Modified M.C.V. ointment (or M.C.V. ointment) with adequate occlusive pressure dressing is an excellent method of local treatment. These dressings should not be changed often. This method can be employed with minimal laboratory procedures.
3. *Debridement in severe and extensive burns is to be condemned.*
4. When second or third degree burns involve as much as 25 percent of the body surface, shock should be anticipated. Shock may develop with as little as 10 per cent of the body surface involved in deep burns, particularly in children or debilitated individuals.
5. Plasma is indicated in the treatment of all severe burns. It should be given early and in adequate amounts. It serves its main usefulness during the first 72 hours.
6. Transfusions of blood are indicated in the early treatment of burns, if the hematocrit is below 60. Frequent transfusions of blood are indicated in the late treatment of burns; they improve plasma proteins more rapidly than plasma.
7. Large quantities of electrolyte solutions are usually indicated, and whenever possible they should be given by mouth. Enough fluids should be given to maintain a urinary output of at least 1500 c.c. daily.
8. Burned patients should be given a high caloric, high protein (200 or more grams daily) diet with adequate vitamins until healing takes place and throughout the plastic surgical procedures.
9. Regardless of the local method employed, satisfactory healing will not be obtained if the patient continues in a poor state of nutrition.
10. Infections may be a serious problem in neglected second degree burns or in extensive third degree burns. When second degree burns are seen early and treated with the method outlined, infections are not ordinarily of major importance.
11. Deep burns should be grafted early, using dermatome split-thickness (thin) grafts whenever possible. When an adequate amount of split-thickness grafts can not be obtained, pinch grafts should be employed.
12. For the correction of contractures and deformities, use dermatome split-thickness (thick) grafts; Z plastics; releasing incisions and pedicle grafts as indicated.

Acknowledgment is gratefully accorded to the authors listed below, for all information which has been obtained from their various writings.

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DISCUSSION

DR. EVERETT IDRIS EVANS, Richmond: One of the unsettled controversial matters concerning the treatment of burns left after the wide and varied experience of the past war has been that of the importance of locally applied sulfonamide or penicillin powder. Although several observers, including our own group, have been at times impressed with the value of the local application of sulfonamide in an oil base to the burn surface, it must be admitted that other groups which included most competent investigators have had excellent results in burn therapy when nothing but the simplest of bland ointments, such as vaseline, was applied to the burn surface. Hence, it is still very difficult to give a final decision as to the importance of the local application of chemotherapeutic agents to the burn surface. The general excellent results obtained when only simple vaseline ointments are applied to the burn surface, especially when they are left untouched from 10 to 12 days, make one feel that perhaps some of us may be over-enthusiastic about the local application of sulfonamides or penicillin to the burn surface. It appears that the most important thing may be the use of the occlusive dressing which is kept in place for 10 to 12 days, at which time most of

the primary healing will have taken place in ordinary so-called second degree burns. I believe that it is honest to say that we still see very little surgical infection in the burns treated with this preparation; also, we have never, so far as I know, seen sulfonamide intoxication from absorption of the drug from the burn surface. Neither have we noted any delay in healing because of the locally applied sulfonamide. Therefore, we must state again that the question of the importance of local application of sulfonamides is still an unsolved matter.

Dr. Lupton has stressed rightly the importance of the adequate management or prevention of shock in the burn patient. One practical point that we have learned: It appears to us that it is well in a severe burn to partition the plasma or whole blood transfusions so that smaller amounts are given about every six hours for the first 24 or 36 hours. We now give regularly whole blood or whole blood and plasma to the severely burned patient at about every six hours, in amount of 500 to 1,000 c.c. We no longer fear giving whole blood because of primary high hematocrit reading. More and more, we are impressed with the value of whole blood in the primary management of burn shock.

Dr. Lupton has spoken of the importance of an adequate urinary output as a guide to fluid intake in the burn patient. A careful record of urine output is probably one of the most important portions of the patient's daily record. If the output can be kept up to 1,200 to 1,500 c.c. during the first 2 or 3 days, one can conclude in an average burn case that therapy is quite adequate. As many of you probably know, we have never been enthusiastic about the use of large quantities of salt in the early treatment of burns, but we do administer salt to the burn patient, i.e., about 9 to 15 gms. of salt daily in the first 2 or 3 days.

As has been brought out so clearly by the work of Lund and Elman, one of the really important matters concerned in adequate burn therapy is the supplying of adequate protein in character and amount to the burn patient. Those of us who are working with burns at the Medical College of Virginia are convinced that adequate protein nutrition probably plays as important role in lowering burn mortality after the shock period is past as any other single factor. Large amounts of protein are needed, often to the amount of 150 to 200 gms. per day. This can be supplied most often by mouth in the form of various meat powders, milk powders, or the newly available lactalbumin and amogen preparations. Large whole blood transfusions are a means of supplying easily fairly large amounts of available nitrogen. Whole blood is a far better source of nutrition in the surgical and burn patient than plasma. From 100 c.c. of whole blood can be derived about 19 gms. of available nitrogen, whereas the same amount of plasma would supply only 4 to 5 gms.

It has been a pleasure to read over carefully Dr. Lupton's paper. I am sure that if his advice and practices were followed in the treatment of the average burn case there would be a general lowering of mortality in severely burned patients in this area.

DR. JAMES GUY PRICE, Norfolk: As Surgical Resident at the Norfolk General Hospital, I have observed and assisted in the care of several of Dr. Lupton's burn cases and have been very much impressed with the results obtained with M.C.V. ointment and compression dressings. There are several features which deserve further emphasis. Due to the local bacteriostatic effect of M.C.V. ointment, debridement and cleansing may be reduced to a minimum, avoiding shock and serum loss at the early, critical stage. The ointment has a marked analgesic effect and since it is very "workable", it can be applied quickly. By varying the wax content, a satisfactory consistency can be maintained in summer or winter. One of the most important features of the ointment is that little or no bleeding or pain is encountered in changing dressings. As a dressing is removed a thin protective film is left covering the raw granulation tissue, which prevents trauma, bleeding, and distress to the patient.

Epithelialization is apparently enhanced with this material and often much less grafting is required than would be expected. We have noted that a satisfactory estimate of the patient's need for plasma, blood, or other intravenous therapy, can be made from the red cell count, and hemoglobin determinations, plus a careful record of the fluid intake and output. This is important since extensive blood chemistry determinations are often impractical.

We keep a well stocked, sterile burn kit available; and this, plus teamwork, saves much valuable time. Usually a team of two or three does the local dressings, while a second team procures and administers plasma and other general care as needed.

Care should he taken in repeating doses of morphine where circulation is poor, since it may not be absorbed until circulatory balance is restored and the full amount of the drug may act at once.

DR. RUSSELL V. L. BUXTON, Newport News: I should like to compliment Dr. Lupton on his presentation, because I feel that it is especially indicated when we are likely to run into these cases of severe burns. It is a very disheartening thing to see a man about one-third or two-thirds severely burned and to feel that you are working under a desperate handicap in not knowing how to proceed or what is the best method of procedure. It certainly seems to me that under his organized set-up the patient should get a good result, or better than when it is not organized.

There is one thing I should like to stress that Dr. Lupton brought out, and that is the desirability and almost the necessity of combining your local and general treatment. I remember one case with a very severe burn that we went to work on with pressure bandages with vaseline gauze, not the ointment Dr. Lupton recommends; and by the time we had applied all the bandages and pressure dressings the man's veins had collapsed to such

a point that it was not possible to put even a cannula in the ankle vein. We lost this patient, I know, partly because we had no other place to put this cannula. Probably half-hour or forty-five minutes before that vein might have been patent.

There is one other thing I want to bring to your attention. I feel sure that Dr. Lupton left it out because of lack of time. That is the necessity of giving these patients tetanus antitoxin. We convert these wounds from open wounds to closed wounds by the compression dressings, leaving a fertile field for the growth of anaerobic bacteria; and tetanus antitoxin should be given.

DR. LUPTON, closing the discussions: I wish to thank Dr. Evans, Dr. Price and Dr. Buxton for their interesting discussions.

I am in complete agreement with the statement that occlusive pressure dressing is probably the most important development in the local treatment of burns in recent years.

From the large number of burned patients which we have observed, I believe that better results are obtained when modified M.C.V. ointment (or M.C.V. ointment) and pressure dressings are used, than when vaseline gauze and pressure dressings are used, because infections appear to be definitely lower, the healing period shorter and the patients are more comfortable.

Essentials of Summer Diet.

A Philadelphia nutrition expert presents some hints on the essentials of a summer diet in the June issue of *Hygeia,* health magazine of the American Medical Association.

Michael G. Wohl, M.D., Chairman, Advisory Committee on Nutrition Philadelphia Department of Public Health, states that "the first requirement of a balanced diet is an adequate energy intake for work, play and the body functions. The amount varies with age, sex and physical activity. For the man of average size engaged in desk work or other nonstrenuous occupation, the daily requirement is calculated, scientifically, as 2,500 calories or heat units. Growing children and laborers require two or three times this caloric intake."

Pointing out that in summer, since there is no heat loss from the body for which to compensate, the amount of food eaten may be reduced, the author cautions that the reduction should not take place at the expense of the proteins.

"Proteins are not only the 'body-building' foods," Dr. Wohl writes. "They are necessary for growth and for replacing tissues worn out through activity, but also they have a vital function in building resistance to infection."

Summer makes no difference in the requirements for the other essentials of a balanced diet, the vitamins and the minerals, states the author. "We must have iron in the blood to get oxygen from the air. We must have calcium and phosphorus to build strong bones, to build tissue, to prevent rickets. Calcium is also essential to maintain nervous stability. We must have iodine to prevent goiter."

New Remedy for Motion Sickness.

A new prescription specialty for "motion sickness" has been announced by Dr. Theodore G. Klumpp, president, Winthrop Chemical Company, Inc. He stated that the new chemical compound was a further development of what was first used by the armed forces during the war and described it as "a logical preparation to combat sea, air, train and automobile sickness." It is the first of its kind on the company's long list of medicines, to be stocked and thoroughly tried for clinical evaluation on major steamship and air lines. "More than 80 per cent of the motion sick travelers studied obtained relief".

"It is a mixture of scopolamine, luminal and atropine. Motion sickness results from excessive stimulation of the organ of balance located in the ear, in addition to apprehension, nervousness and fatigue incident to modern travel. Scopolamine and atropine are known to produce the best clinical results in counteracting the physical effects of unaccustomed motion, while luminal, through its calming effect, allays the apprehension and excitement which contribute to sea and air sickness."

THE PSYCHONEUROSES*
What the General Practitioner Should Know

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There are more patients today who are in need of psychiatric help than could possibly be treated by all our available psychiatrists. This fact can only mean that many of these patients will continue to be seen and treated by the general practitioner—whether he likes it or not—if they are to receive treatment at all. It has been estimated that from 40 to 60 per cent of patients in the out-patient clinics of our general hospitals are in search of medical aid because of emotional problems rather than organic disease. Even where the problem is primarily of organic etiology, the psychological factors may also be of particular importance. It has been reliably reported that during the period from January 1, 1942 to June 30, 1945 one and three-quarter million men were rejected for military service for neuropsychiatric reasons, and during this same period another million men were hospitalized for neuropsychiatric treatment. Most of this group had minor emotional disturbances for which hospitalization is usually not necessary in civilian life because of its greater flexibility of adjustment possibility. Under incidental stresses these patients may have some recurrence of symptoms which serves to stimulate a visit to their physician. The Veterans Administration is attempting to meet this challenge by the formation of out-patient mental hygiene clinics where active psychotherapy can be made available. At present only a limited number of patients are receiving psychotherapy due to the scarcity of trained psychiatrists, even though every effort has apparently been made to expand the program.

What of the men and women who were rejected for military service for psychoneurosis, and what of other psychoneurotics in the civilian population? Will the general practitioner be ready and willing to share in responsibility of treatment of these patients? If so, what can he do to prepare himself for this important work?

A discussion of this problem might be divided into several topics.

1. Avoidance of misconceptions.
2. Development of tolerance and real interest.
3. Development of clear concept of personality function.
4. Classification.
5. Treatment.

1. MISCONCEPTIONS

Some laymen have many misconceptions about mental illness, and unfortunately this is also true of some practicing physicians. What are some of these misconceptions? Many people believe that any type of mental illness means insanity, lost mind, or maniacal behavior. Actually, only a few patients with major psychoses show such behavior, and only infrequently is it even necessary to hospitalize the psychoneurotic patient. Many people believe that all patients with any form of mental illness are incurable, whereas we know that most psychoneurotics are amenable to therapy and a large percentage of psychotics also respond well. Many people believe that there is a definite stigma attached to any mental diagnosis. There is no basis in fact for such a conclusion. This concept seems to be a residual of an ancient theory that mental illness was due to infestation by evil spirits. Many people believe that mental illness is only caused by physical disease, but we know today that patients having psychogenic psychoses or psychoneuroses actually have no such abnormal physical condition. Here the problem is primarily one of disturbance in the emotional life of the individual. Some believe that all mental illnesses are uniform in gravity and appearance, that such illnesses are hereditary or caused by some injury, and that good intelligence and mental illness are incompatible. Let us insist that modern medicine banish such misconceptions and that we approach these problems strictly through the scientific method, with our minds unhampered by such shackles of superstition.

2. TOLERANCE AND INTEREST

There are certain physicians who, after finding no physical cause for the patient's complaint, feel a definite sense of frustration which may be ex-

*Presented at the Postgraduate Course in Internal Medicine sponsored by the American College of Physicians at Gallinger Municipal Hospital, Washington, D. C., November 1, 1946.

pressed in the statement, "You have no physical disease and I cannot help you—you just think you are sick." After such remarks some physicians lose all interest in the patient and often hope he will not return. Another physician, in attempting to follow some physical treatment method for the emotionally distressed patient, may say, "Your blood pressure and heart action are not exactly normal and we must start treatment." Both decisions are probably in error—the first because it shows lack of tolerance, interest and understanding, and the second because the comment may convince the patient that the cardiovascular condition is serious and is the cause of his symptoms. This conclusion will thus tend to foster invalidism. The best stimulus to good patient-physician relationship is an attitude of wholehearted, sincere interest on the part of the physician, along with a willingness to listen carefully at least once to the patient's entire story of his complaint problem. The alert physician will learn much of the personality of the patient from the method of recital itself as well as from the content material. With the development of individual techniques of interviewing, the physician will find himself elated with his successes and stimulated to further study. A broader personal tolerance will be gained and this will stand him in good stead when psychotherapy begins to be utilized in the treatment situation.

3. Personality Function

Even though we have learned much about personality and behavior disorders through specific studies of such disturbances, it is necessary to keep in mind a fairly clear conception of the personality development and average function in a fairly well integrated individual. Such concept is useful as a standard for comparison. It seems obvious that the maturation of the personality to the point where the individual through excellent integration can live in a milieu of adequate self-esteem, security and happiness with his social group, should be the ultimate aim and goal of everyone. The culmination of such aim is dependent on the individual's hereditary physical equipment, capacity to learn, and his biological urges or drives, as well as his interpretation of life experiences in conjunction with his motivations.

Whether the medical man prefers to accept all the precepts of one of the dynamic theories of behavior such as the behaviorism of Watson, the psychoanalysis of Freud, the biodynamism of Masserman, or the psychobiology of Meyer, would seem largely a matter of personal choice rather than necessity. Probably the most workable theory will depend on the personality structure of the physician using it, rather than the personality of the patient under treatment anyway. Allport has defined personality as "the dynamic organization within the individual of those psychophysical relationships that determine his unique adjustments to his environment." Such dynamic organization is seriously influenced by the early child-parent relationship. The smooth, steady, loving yet firm and intelligent interpersonal response of the parents does much to promote similar response in the child. As maturation proceeds such child seems able to withstand larger and larger doses of frustration without disturbed emotional equilibrium. On such stable personality integration may well depend his future mental health.

It has been clearly demonstrated that personality function becomes disturbed during periods of unusual stress. The extent of such disturbance will depend on the degree of integrating stability as well as the duration and extent of the stress. Vulnerable personalities will show earlier difficulty and will not rebound to previous normality as quickly as the better integrated personality. This was repeatedly demonstrated in both world wars in instances of combat induced anxiety. In those patients where the relief of stress does not result in return of normal personality function, the anxiety continues in obvious evidence or it tends to become camouflaged through the development of substitutive behavior patterns. It is at this stage that we can say that personality deviation has occurred to such extent that the patient now shows a psychoneurotic reaction or a psychoneurosis. The symptom of anxiety, which is the core of difficulty in the neuroses, seems to be a result of the conflict between the instincts or biological needs, such as nutrition, self-protection, and sex and the culturally determined need of personal prestige in the setting of attempted domination by the personal censor, the conscience.

The symptom of anxiety is directly felt by the patient in anxiety neurosis and anxiety hysteria, as well as when the compulsive set of behavior is threatened in the psychasthenic. It is quite camouflaged in hysteria—where we often see an attitude of "la belle indifference". Anxiety often results in

overstimulation of the autonomic nervous system, which culminates in various somatic responses simulating actual organic disease. When we have a clear idea of the personality of our patient, his usual modes and methods of response to stress, his motivations and his present stress situation, we can then begin to understand the specific meaning of the presenting symptoms. These symptoms issue from the conflict situation and seem to be an expression of the patient's failing attempt to reach a stable equilibrium.

4. CLASSIFICATION

Classification of the various psychoneurotic responses has been made by different procedural methods. The official classification as recommended by The National Committee for Mental Hygiene and accepted by most public mental hospitals follows:

1. Hysteria.
2. Psychasthenia or compulsive states.
3. Neurasthenia.
4. Hypochondriasis.
5. Reactive depression.
6. Anxiety state.
7. Mixed psychoneurosis.

It has been my experience that most psychoneurotic patients show a great variability of symptoms during their illness, with the result that a different diagnostic category seems indicated at these different times. For that reason it seems well for the physician not to think too much about the importance of a correct diagnostic label, but to think more in terms of what do the symptoms indicate is happening within the personality structure. When so considered, we are utilizing the dynamic rather than the topographical approach to the undertanding of such disorders.

The most frequent personality adaptations utilized by the psychoneurotic patients are phobias, obsessions and compulsions, substitutions, conversions, preoccupation with body functions, and the development of invalidism. Such adaptations are not socially acceptable and in the majority of instances the patient realizes this fact, as well as the "irrational" nature of his symptom responses. This fact in part distinguishes the psychoneurosis from the psychosis. In the psychosis we also find one or more of the following:

1. Demonstrable specific organic pathology.
2. Mental deterioration.
3. Marked mood disturbance.
4. Extreme and persistent distortion of reality.

Many psychiatrists are coming to believe that the primary difference between psychoneurosis and psychosis is quantitative rather than qualitative and that the psychoneurosis stands midway between "normal" personality function and the marked dysfunction evidenced in the psychosis.

5. TREATMENT

How can the general practitioner approach the problem of therapy in the psychoneuroses? If he has eliminated his misconceptions concerning mental illness, if he has tolerance and real interest and if he keeps clearly in mind the primary functions of personality, then the approach to therapy is not difficult. The principles of treatment follow very specifically from the facts in the development of the personality disorder. Anxiety is the symptom which causes the patient the most distress and our first effort is aimed at its diminution. Through a calm assessment of the facts in the patient's life history and in the complaint problem, the understanding physician can utilize enough of constructive suggestion, persuasion and explanation to give reassurance to the patient and temporarily allay his anxiety. The actual telling of the story is often helpful in itself. The primary effort in treatment is directed at changing the environmental or interpersonal stress factor or in altering the personality structure of the patient or both. The first mentioned can very often be rather easily changed or adjusted, but the latter is more difficult. However, if the physician can gain the full confidence of the patient, he may then be able to gradually influence the rigidity and severity of the conscience factors in the patient and thus gradually increase the patient's tolerance of himself as well as his life situation. In this way the patient comes to gradually understand his own responses to stress, insight is gained and intelligent utilization is made of those factors which will foster personal security and better integration. Such is the true aim of psychotherapy. The patient's potential assets can thus be mobilized and better used. Such efforts are time consuming, of course, and the physician may find it expedient to refer the patients with more severe emotional reactions to a psychiatrist for more careful, extended or special treatment. Only the experienced and specially trained psychiatrist should use such additional treatment

methods as narcotherapy, hypnotherapy, sub-shock insulin, electro-shock therapy or psychoanalysis.

SUMMARY

A very brief summation of what the general practitioner should know about the psychoneuroses has been attempted. Emphasis has been placed on eliminating misconceptions, the promotion of the physician's interest and tolerance, the development of a clear concept of personality function, the classification of the various psychoneurotic reactions and their treatment. Most of the patients with this type of personality disorder will not be treated by psychiatrists, but by the general practitioner, and on his attitude toward treatment may rest the final outcome of a large sector of our civilian population who are failing in adaptation.

Physical Exams Have Depreciated.

The tendency of the Civilian Aeronautics Administration to depreciate the quality of physical examinations for pilots has been assailed by both *The Journal of the American Medical Association* and the *Journal of Aviation Medicine.* The May 10 issue of *The Journal of the A.M.A.* says:

The Journal has commented previously on the failure of the Civilian Aeronautics Administration to have its physical examinations conducted by competent physicians. The *Journal of Aviation Medicine* points out that the department ruled that osteopaths could make these examinations a few years ago and now examinations are being accepted even from chiropractors. How many of the persons who observe air transport realize that this is the type of protection afforded by the government agency? When one contrasts the kind of education given to low grade nonmedical healers with the type of examination made by specialists who are really competent in examining the eyes, the ears and the other special senses on which safe flying so greatly depends, the folly of accepting examinations by the incompetent becomes clearly apparent. The *Journal of Aviation Medicine* points out that the bars have not thus far been lowered in the case of commercial and airline pilots, but the tendency to depreciate the quality of the examination makes the hazard of such lowering imminent. Surely here is a responsibility that the administrator cannot dodge.

Disease Rate High Among Day Nursery Children.

A Swedish social welfare committee, investigating the incidence of disease in state-aided day nurseries, found that nursery children were more susceptible to disease than children who stayed at home, according to the Stockholm correspondent of *The Journal of the American Medical Association.*

Writing in the April 26 issue of *The Journal,* the correspondent states that according to the report "many of the nursery children have had colds for long periods and many have constant fever. Ear infections are far more numerous. Sinus and kidney inflammations have appeared among the nursery children, but not in the control group (children who stayed at home). Bacteriologic studies revealed that certain types of bacteria, which do not ordinarily appear in epidemic form, have caused minor epidemics at the nursery and that children are hardly recovered from one infection before they contract another or are perhaps infected with several types of bacteria simultaneously."

The investigating committee made recommendations for the installation of ultraviolet lamps and the impregnation of floors and textiles with oil to reduce the risk of infection. "With such a large percentage of Swedish mothers out at work every day," states *The Journal* correspondent, "these nurseries are of the utmost importance in the present state of society."

PENICILLIN IN SYPHILIS*

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Ehrlich was much elated when he first discovered arsphenamine. He thought that he had found the wonder drug to cure all syphilis. He was soon disillusioned. It promptly became very obvious that his single "shot" treatment not only did not cure syphilis, but, given in such quantity as to approach a high cure rate, it also caused a high death rate. Since this original discovery, it has been shown that in order to have an optimum cure rate and a low death rate, the administration of the drug must be prolonged over days, months, and even years in some cases.

To Dr. John Mahoney at Staten Island, New York, goes the credit for the discovery of the value of penicillin in syphilitic therapy. Mahoney is a very modest man and even to this date, after over four years of research, he makes no claim that penicillin is the ideal drug. By an ideal drug we mean one which cures but does not kill.

Soon after Mahoney's discovery, we began using penicillin in the treatment of syphilis at the National Naval Medical Center. Over a three year period of time, 788 patients have received penicillin for the various stages of syphilis. The purpose of this paper is to point out the observations made in this study, listing both the advantages and disadvantages of the drug. It cannot be said that it is the ideal drug. On the other hand, it is a good drug.

Up until March, 1946, the following dose schedule was used: (1) Early syphilis, 40,000 units I.M. q. 3 h. for 60 doses; (2) Latent syphilis (late) 40,000 units I.M. q. 3 h. for 100 doses; (3) Central nervous system syphilis, 40,000 units I. M. q. 3 h. for 200 doses plus ten (10) artificial fever treatments. It was felt that satisfactory progress was being made. A fairly low relapse rate was occurring. Then all of a sudden the bomb exploded. There were certain indications from various places that a high relapse rate was occurring in syphilis. A high failure rate in the treatment of gonorrhea, pneumonia and other diseases, due to supposedly penicillin susceptible organisms, was occurring. It became known that commercial penicillins contained four fractions—namely, penicillin G., F., X. and K. Very little is known in regard to F. and X. Penicillin K., although more potent than G. *in vitro*, was found to have very little, if any, value *in vivo*. It was also known that in order to produce a penicillin high in G. precursors had to be fed the mold. It was then realized that one theoretically might obtain a penicillin very high in K. and very low in G., which would have to be classified clinically as a poor penicillin. At that time no assurance could be given that one was always obtaining a penicillin rich in G. Consequently, the Navy routine of treatment was changed so as to be as follows: (1) Primary syphilis—100,000 units I.M. q. 3 h. for 60 doses; (2) Secondary and latent syphilis—100,000 units I.M. q. 3 h. for 90 doses; (3) C.N.S. (central nervous system) syphilis—100,000 units I.M. q. 3 h. for 200 doses plus ten (10) artificial fever therapy treatments. In this way, it was felt that each individual patient in all probability would receive a drug fairly rich in G. The placing on the market of commercial penicillin G. may render such a large dose unnecessary.

At the Naval Hospital during the war, it was a routine to send penicillin treated cases back to duty immediately upon the completion of their course of therapy. At that time the lesions in the majority of the cases were not completely healed. However, no case had remained darkfield positive more than 20 hours. These cases were under orders to report for periodic examinations. In spite of this, the doctors in the area frequently called, expressing amazement that patients were sent back to duty with open lesions. These lesions would heal within five to seven days after the treatment was completed.

Also, with the possible exception of sero-negative primaries, the blood test was still positive when the treatment was discontinued. From an analysis of this series of cases, it was found that on the average the serology approached negativity in six months in primary syphilis, in 8 months in secondary syphilis, in 9 months in the latent serological syphilis only, and in 7 months in asymptomatic central nerv-

*Read before the annual meeting of the Medical Society of Virginia, at Virginia Beach, October 14-16, 1946.

ous system syphilis. However, in a group of cases with the original basis of diagnosis being a positive serology only and having had much treatment with arsenicals and bismuth, some for ten years, no change could be brought about in the serology with penicillin. This brings up the often asked question of what can be done with syphilitic John Doe who has received arsenic and bismuth for years but whose blood is still positive? The answer is, nothing. In view of the fact that the serology of four groups of definitely proven syphilitics, namely, primary, secondary, high titre serological and central nervous system syphilis can be definitely influenced by penicillin, why then can nothing be done for the Wassermann-fast case? Could it be that these cases do not have syphilis but belong in the group of general biological false positives?

With the exception of sero-negative primary syphilis, prenatal syphilis, congenital syphilis, the over-all failure rate has been fairly high. A total of 600,000 units produces an estimated failure rate of approximately 65 per cent. A total of 2.4 million units produces an estimated failure rate of approximately 15 per cent. It is of interest that in the group treated with a minimum of six million units since March, 1946, there has been to date no single known failure. It should, however, in fairness be pointed out that many of these cases have been separated from the service and many others transferred to distant areas.

When the Penicillin Control Committee (Craig and others) reported their observations on the first 2,000 cases treated, no mention was made of untoward reactions other than a few mild Herxheimers occurring in the treatment of early syphilis. This report was made in the early part of 1944. The present committee does not agree with that report. From their observations in the treatment of over 20,000 patients with penicillin for one thing or another, it is felt that the over-all reaction rate is approximately 8 to 10 per cent. Penicillin is capable of producing three types of reactions:

I. Therapeutic shock—
   a. Herxheimer reaction
      (1) Early syphilis manifested by chills and fever and of no great significance.
      (2) Latent syphilis may be very dangerous, particularly involving the nervous and cardiovascular systems.

II. Allergic reactions—
   a. Urticaria and laryngeal edema (may be fatal)
   b. Exacerbations of fungus infections with "id" reactions
   c. Dermatitis venenata from its topical use
   d. Exfoliative dermatitis

III. Neuritis—
   This is thought to be some type of toxic reaction usually involving the peroneal nerve with footdrop.

Penicillin may also produce an immediate and delayed allergic reaction. It is known that penicillin can be recovered from the urine for as much as six to eight weeks, in some cases, after the drug has been discontinued. It is true that the majority of the reactions are mild, transitory and lend themselves to good dermatological treatment. The advent of benadryl has been of great value in controlling the urticarial reaction. In many cases in which urticaria occurs, penicillin can be continued and the urticaria controlled with benadryl.

It is felt, however, in view of the large number of reactions that do occur and the potential danger of some of them, that penicillin should not be administered to any patient unless under medical observation. A great deal of credit should go to American Industry for their mass production of penicillin which has undoubtedly saved hundreds of thousands of lives in both the Armed Forces and in civilian life. In spite of this, it is felt that the American public has been sold "down the river" by the sale over the drug store counter of penicillin in ointments, lotions, nose drops, mouth washes, tooth paste, and even soap. Less than a decade ago we saw this same thing happen with vitamin therapy.

By the way of conclusion, the following outline summarizes some of the things we do know and do not know about penicillin in the treatment of syphilis:

(1) It renders positive darkfield lesions negative just as quick, if not quicker, than any other drug, but we don't know how long it will keep them negative.

(2) It produces a reversal of serology just as quick as any other drug, but it may not stay reversed.

(3) It causes gummatous lesions to disappear quicker than with the use of any other drug, but we have no assurance that another gumma might not occur elsewhere.

(4) It produces a reversal of spinal fluid to negativity especially in regard to the cell count just as quick as any other procedure, but we do not know five to ten years from now if that patient will be alive and well, in an insane institution, or in the grave.

In conclusion, it can be said that we are in all probability in the same boat that Ehrlich was when he first discovered 606. He knew that he had a good drug, but time has proven that he did not know what to do with it.

DISCUSSION

DR. THOMAS W. MURRELL, Richmond: This paper will have various effects, according to the age of the hearer. To one, whose first cases of syphilis were treated with mercury and iodides; who went through the chaos of the early arsphenamines; it is an old story, neither unexpected nor disheartening.

Two years ago, at the American Medical Association meeting, an essayist on penicillin said to the audience; "Please remember—this is the first inning, not the ninth." It takes twenty years to prove luetic therapy, and so we can say today; "Remember—this is the second inning; not the ninth". Only when twenty years have passed will the relation of this drug to the central nervous system involvement be proven. Adequacy is a big word, and nowhere in the development of penicillin therapy is it more true that the adequacy of today is the inadequacy of tomorrow.

It is plain from Dr. Barksdale's paper that the situation of penicillin therapy is in a state of flux, but there is hope for better things. This hope is built on several "ifs" and some more likely of fulfillment than others.

"If" the manufacturers can work out a technique of standardization of the factor most effective! This seems the most likely of our hopes to be fulfilled.

"If" some modification can be made to slow up its excretion by the kidney and so maintain a proper blood level without so much replacement! This would, indeed, be a fulfilled dream.

In the meantime, "What is the best technique of use?" is the pressing question with the average practitioner. Dr. Eagle, in a recent address, made a statement which suggests a possible answer. This refers to the synergistic action of drugs used in luetic therapy. He states that mapharsen is synergistic with penicillin and that bismuth is synergistic with mapharsen, but bismuth is not synergistic with penicillin.

If the treatment is to be lengthened it would seem reasonable to first treat with penicillin and mapharsen, then mapharsen and bismuth, and, finally with bismuth alone.

The great hope is that syphilis, through penicillin, may once more become the problem of physician and patient, treated in the office with all the protection of professional care and all that this implies.

Crusades are great things educationally, but, like the religious crusades of old, they seldom reach and never hold the Holy sepulchre. The crusade against syphilis has, in a large measure, shifted the responsibility of the situation to the shoulders of the agencies of Public Health. They have met this largely through Clinics, rapid treatment centers, and other measures, but they are not succeeding. Why? Because the physician is indispensable.

Though on our way, we have not yet rid ourselves of the leper complex about syphilis. A self-respecting individual in an average community cannot afford the exposure of the rapid treatment center. On the other hand, the average wage earner cannot afford the same service paying for hospital space and penicillin costs. It reminds me of Osler's address on the hospitals of England, when he first went to Oxford. The very rich and the very poor receive ample care, but the large group between the extremes was neglected.

Now, if due to a different technique (such as the penicillin in wax), adequacy can be met by a daily dose, and if the drug can be supplied by Public Health and given in the dignity of a doctor's office, if that can be, then the old syphilographers may quote the Scriptures: "Lord, now lettest Thou Thy servant depart in peace for mine eyes have seen Thy salvation."

If this almost dazzling hope can become a reality, the Public Health should make one definite pre-requisite—public money is a public trust and should not be wasted, and no case treated out of public funds should be given the drugs unless it is understood and agreed previous to treatment, that a spinal examination will be done and results reported, three to six months after completion of routine.

This is a keystone "must"; without it the future will always be uncertain and a possible dread.

DR. E. M. HOLMES, Richmond: Dr. Barksdale is to be congratulated on his comprehensive presentation of a most difficult subject.

Today, as Dr. Barksdale said, "Penicillin therapy is in a most confused state." Part of this confusion is due to the fact that there are innumerable dosage schedules being used, and also because the complete pharmacological action of the various fractions contained in the drug is not known. These factors, coupled with the reported high serological and clinical relapse rates, have all served to cause confusion, and, in turn, caused many of us working with the drug to become at times pessimistic. Despite all of the confusion, penicillin, from the viewpoint of the public health officer, is still the drug of choice in the treatment control of the syphilitic.

With the advent of penicillin in the treatment of syphilis, the need for case holding, i.e., field visits by nurses and investigators, has been obviated. In the period 1936 through 1942 the clinics and private physicians

throughout the State were using the various arseno-bismuth schedules of therapy. In that period the local health departments were compelled to make constant home visits to keep patients with syphilis under treatment. In many instances the health officer was forced to resort to quarantine and legal measures to hold infectious persons under treatment for the protection of the public health. This practice was time consuming, expensive, and caused the very important case finding program, i.e., contact investigation, to be neglected. Under the old system of treatment the patient had to come to the public clinic or to the family doctor's office at least once and sometimes twice a week for periods as long as eighteen months to two or three years. This placed a hardship on both the patient and the physician. In consequence, nearly all private physicians referred their patients with syphilis to public clinics, and persons with syphilis lost contact with their physicians, and, in turn, the personal aspects of the patient-doctor relationship suffered.

The public clinics failed to achieve their objective in that they did not provide adequate treatment due to difficulties encountered in case holding. Of the 20,000 or slightly more persons placed under treatment for syphilis in this State in the interval 1936-1942, surveys revealed that only 19 per cent remained under treatment long enough to receive minimal acceptable therapy (20 arsenical and 20 bismuth injections). Thus, many individuals relapsed to infectiousness and became a danger to the public, and many more will relapse and become late syphilis catastrophes.

Virginia is not the only State to have difficulties in its case holding. Nearly all states and quite a few of the private clinics in America experienced the same difficulties. The problem in case holding was universal due to the fact that the treatment was painful, tedious and time consuming. Thus, as a public health officer, I must admit that the clinic system under arseno-bismuth therapy failed to achieve the desired results.

Using penicillin under local hospitalization or in rapid treatment centers, we are now able to control the infectious patient. The newer form of therapy has obviated the necessity of case holding and the public health nurses and investigators are now able to devote their time to intensive case finding work and follow up of the treated case for the private physician.

Both from the private physician's viewpoint and public health viewpoint, penicillin is the drug of choice at this time in the treatment of syphilis. Under many of the acceptable dosage schedules that a physician may elect to use, if the patient is followed up, examined and given a quantitative serologic test at monthly intervals, there is little danger of the patient being a source of danger to the public health. By following up these patients with quantitative serologic tests both serological and clinical relapse can easily be detected, and those patients who relapse can be re-treated. Thus, I can only conclude that we can control the group of patients, mentioned by Dr. Barkdale, who relapse to infectiousness without danger to the public health, and, in turn, we gain the advantage of a system of treatment that can be given rapidly and which is far easier on the patient. Under any system of therapy, the arsenicals or penicillin, we must follow up the patient for at least five years. Penicilin therapy as contrasted with the old arseno-bismuth treatment has many advantages to both the patient and the public health.

The importance of the quantitative serologic test cannot be over-emphasized at this time. In March, 1946, it was discovered that much of the commercial penicillin which was distributed contained a high "K" fraction content. Many of you recall it was necessary for the Syphilis Committee of the Medical Society of Virginia to advise all physicians and clinics to double the dosage used at that time. It is to be hoped that Crystalline G penicillin will be freely available for use in a short time. However, cases treated since March, 1946, should be given monthly quantitative serologic tests for a period of a year and re-tested on the 15th, 18th and 24th month, and at least once a year thereafter for five years.

I agree with Dr. Murrell that the time has come for the patient with syphilis to be referred to his family physician. He in turn can refer early syphilis to the rapid treatment center or hospitalize the patient in a local hospital. The private physician is better equipped to treat late syphilis than the clinic. With this thought in view, within the last six months the State Department of Health has changed its clinics from treatment centers to diagnostic and screening centers. In the future these clinics will serve as consultation stations for the private physician and as referral agencies to refer cases to the family doctor. The screening clinics will largely be used to perform examinations on contacts of infectious cases.

In conclusion, I feel that Dr. Barkdale's paper will be of great value to the State's control program, in that he has so thoroughly outlined the advantages and disadvantages of penicillin therapy in syphilis.

DR. BARKSDALE, closing the discussion: First I wish to thank the gentlemen for their very kind discussion.

Dr. Murrell brought up Dr. Eagle's idea in regard to the synergistic action of arsenic and penicillin. I am sorry, but at the moment I do not agree with Dr. Eagle. It is true that there is some laboratory evidence that such a thing does occur. However, clinically there is no substantial proof of this. Just before leaving Washington I discussed this subject with Dr. Heller, Chief of the Venereal Disease Section of the United States Public Health Service, and he told me that in their series of cases they were under the opinion that the failure rate with mapharsen and penicillin was just as high as it was with penicillin alone. Frankly, if penicillin has failed in an individual case, I cannot see the advantage of adding a schedule of a few doses of arsenic and bismuth which alone carries an extremely high failure rate.

In regard to penicillin, peanut oil and beeswax, I have personally had very little experience with it. However, I recently heard Romansky's paper at the meeting of the

American Medical Association in San Francisco, at which time he stated that in his experience the failure rate was approximately the same as with arsenic and penicillin. Dr. Sulzberger, in discussing Romansky's paper, did, however, state that when you add beeswax you increase the reaction rate. This is apparently because American beeswax contains ragweed pollen and, theoretically, if you gave it to a patient that was sensitive to ragweed you might produce an anaphylactic shock.

We do spinal fluid examinations in early syphilis. We prefer to do them before treatment has been started. If the spinal fluid shows any type of abnormality, the examination is repeated at the completion of treatment. If it is still abnormal we go ahead with fever therapy and more penicillin.

It was stated that the clinics in Virginia have failed. I agree with this. However, it should be pointed out that the reference was to the clinics in the past using arsenic and bismuth. They have failed because it was impossible to keep a patient coming long enough to complete adequate treatment. It is on this one point that penicillin has a great advantage in the therapy of syphilis.

Microfilm Service Available from Army Medical Library.

Newest examples of microfilm duplication of the nation's greatest collection of medical literature were on display at the Fifth International Congress of Pediatrics meeting in New York in July. It was sponsored by the Photoduplication Division of the Army Medical Library, branch of the Office of the Surgeon General, U. S. Army.

A treasure chest of medical information, going back in some cases to medieval times, the Army Medical Library in Washington now has a collection of more than 1,000,000 volumes that have been gathered, catalogued and indexed since 1836 when Surgeon General Joseph Lovell began the work during the administration of President Andrew Jackson.

Through the microfilm service of the Army Medical Library, physicians, libraries and professional workers almost anywhere in the world may obtain facsimile replicas of this great bulk of existing medical literature on 35 millimeter film, according to Colonel J. H. McNinch, Commandant of the Army Medical Library.

Any page of a medical journal, book or manuscript is photographed with high-speed cameras in the microfilm process. The physician or researcher requesting the material receives the film reproduction reduced to the size of a large postage stamp for each page. These pages can be read either in small-size film viewers which enlarge the tiny microfilm, or they can be projected to large, readable size in special machines now available in many libraries and research centers. A whole book on microfilm takes only as much space as the corner of a coat pocket.

Costs are moderate for the microfilm duplicating service that brings the world's medical literature into the office of any physician however remote. Articles in medical periodicals are duplicated on microfilm for fifty cents each. Books are duplicated for fifty cents for each fifty pages or fraction thereof. Photostats are priced at fifty cents for each ten pages or fraction thereof for any single volume. There are certain restrictions on photoduplication to protect the rights of copyright owners.

Measles in Combating Kidney Disease.

Measles may prove to be effective in combating nephrosis, a kidney disease sometimes found in children, according to Drs. Richard W. Blumberg and Harold A. Cassady, of Cincinnati. Of five patients with kidney disease who became infected with measles, they state, the symptoms subsided in two while the other three experienced temporary improvement of their nephrosis. The physicians, who are from the Children's Hospital Research Foundation and the Department of Pediatrics, University of Cincinnati College of Medicine, point out that infection with measles was more effective in causing abatement of the kidney disease than any other curative agent they used. Writing in the *American Journal of Diseases of Children,* published by the American Medical Association, the authors also cite reports by other investigators which list four or five complete cures of the kidney ailment after infection with measles.

TREATMENT OF THE SPASTIC COLON*

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The symptoms of a spastic colon present a definite clinical pattern which offers much aid in the diagnosis of this condition. All too often the diagnosis is made simply because there is no obvious organic disease to explain the patient's symptoms. The poor results obtained in the treatment of these patients are proof of the fallacy of this type of thinking. Some disturbances in colon function are encountered in a wide variety of diseases and conditions, and the colon symptoms will disappear when the primary condition is corrected. Chronic infectious diseases, nutritional disturbances, endocrine disorders, and allergy may give rise to colon pain and disturbed bowel function and must be ruled out. Intra-abdominal disease, such as renal or pelvic disease, either because of its proximity, or through the colon reflex, may give rise to colon symptoms. Myositis or neuralgia of the abdominal wall is often falsely diagnosed as colon spasm. Carcinoma of the colon, diverticulitis, partial intestinal obstruction, dysentery, ulcerative colitis, gastrogenous diarrhea, and duodenal ulcer must all be ruled out by appropriate examination.

We have come to associate a fairly typical type of individual with the spastic colon syndrome, and lacking that type of personality throws much doubt as to the correctness of the diagnosis. These patients are a high tension type, frequently with a well developed anxiety neurosis. Besides the spastic colon syndrome, they show many other signs and symptoms of an unstable vegetative and vasomotor nervous system. Characteristically, they show hyperhidrosis, hyperventilation, heart consciousness, jitteriness and easy fatigability. This is the fertile soil necessary for the development of spastic colon syndrome.

For the diagnosis of spastic colitis, therefore, we as physicians must evaluate the individual and elicit a suitable background for a functional disorder. The variability of type and location of pain, as well as the character and frequency of the stool passages, must be noted. The physical findings should be searched for. Then, by complete history, physical examination, and appropriate tests, other causes should be thoroughly eliminated. When we have satisfied ourselves that we are dealing with a neuro-muscular dysfunction of the intestinal tract, our approach to treatment should be with two main objectives. First, local measures directed to relieve the symptoms, and, secondly, measures to relieve the underlying cause.

The first is usually not difficult, though some patients continue to have intractable symptoms until the underlying cause is determined and alleviated. The diet should be bland, low roughage in type—uncooked vegetables, seeds, skins, seasoning, and spices should be eliminated. It should be given in three fairly equal meals, or, in severe cases, in five meals, so as not to over-stimulate the intestinal reflexes by large meals. Coffee, because of its stimulating quality, should be limited to one cup at breakfast. Six to eight glasses of water is a minimum.

Many patients have resorted to cathartics and enemas to obtain bowel function. These should be stopped. It is necessary to explain to patients the irritating nature of these to get his or her cooperation. The nature of the defecation reflex and the importance of a habit time must be explained. By the use of cathartics and enemas, the normal reflex has not been allowed to function, and it is up to the physician to help reestablish that reflex. The reflex is set off by stretching the sigmoid and rectum, and this can be accomplished by relieving the spasm and irritability and increasing the bulk of the stool. There are several preparations which increase the bulk of the stool and at the same time are not irritating to the bowel. The base of these is psyllium and agar which have the ability to hold water in a collagenous form. One or two teaspoons of one of these with two glasses of water upon arising in the morning will materially increase the quantity of the stool. The addition of one to two tablespoons of mineral oil at bedtime will keep the stool satisfactorily soft. In some patients a two-cup cool tap water starting enema may be necessary from time to time during the period of regulation. In extreme cases with hard packed stools, a four-ounce cottonseed oil retention enema given each night for

*Read at the Symposium on Therapy, February 18-19, 1947, Medical College of Virginia, Richmond, Virginia.

a week is most helpful in establishing a normal routine. Where there is local anal pathology, such as cryptitis or hemorrhoids, these should be treated by appropriate means. The digital dilatation of a tight anal sphincter may help materially to establish the cycle.

Belladonna is the drug of choice for relieving the spasm and distress with which these patients suffer. It should be given in the form of the tincture and in increasing doses until the symptoms are relieved, or until tolerance is reached.

Sedatives have an important place early in the treatment. Sodium barbital, because of its more prolonged action, gives a fairly constant sedative effect. 2½ gr. tablets taken three times a day is usually sufficient. Phenobarbital gr. ¼ three times a day and gr. ½ at bedtime is widely used. Chloralhydrate gr. x in peppermint water three times a day can be used where barbitals are contraindicated.

During period of acute abdominal pain and distress, bed rest with local heat to the abdomen will usually give relief. In a few cases with continued pain, initial doses of 1/100 gr. of atropine sulfate every four hours may be necessary. Papaverine in doses of 1/6 to 1 gr. may be added to the atropine and will be found quite effective. Calcium gluconate 15 gr. given intravenously may completely relieve the abdominal pain and distress of an acute attack.

Mateer and others have reported excellent results in the relief of colon distress and the associated headache and dizziness by the use of colon bacillus vaccine. They feel that because of the colon irritation the patient becomes sensitized to the colon bacillus and symptoms are perpetuated on an allergic basis. Desensitization of the patient by graduated doses relieves the symptoms. Sodium ricinolate (soricin) 5 gr. t.i.d. will also frequently help relieve toxic systemic manifestations.

The most common underlying cause of the spastic colon syndrome is an anxiety or tension state. Many psychiatrists believe that the basic condition can only be approached by psychotherapy. This may be true where the problem is psychogenic, but instability of the autonomic nervous system may produce spastic colon symptoms in the absence of any recognizable psychic factor. The personality and background of the patient must be studied. The patient's confidence must be won. Incidents which seem to aggravate symptoms must be noted, for in them we may get a valuable clue as to the fundamental cause. The help of a trained psychiatrist may be necessary to ferret out and help treat a deep-seated anxiety state, but in most cases these are not that complex, and the physician can evaluate and correct them successfully. Many patients with this disorder harbor a cancer phobia or have a dread of surgical operations and colon resections. The patient must be reassured on this point, and the nature of the disorder must be adequately explained. The patient must be given insight into what causes his distress in order to treat him successfully.

Sexual maladjustment is notorious in producing tension states. Patients are reticent to talk about it because they feel disloyal by so doing, and, also, they do not know how to put it into words and are embarrassed. Patience and understanding on the part of the physician and leading questions at later visits will usually bring out the necessary information. Nervous tension and anxiety factors associated with work as well as home life must be reduced to a minimum wherever possible. Where tension states are high and progress is slow, a holiday from business and home will frequently prove most beneficial. New interests must be developed and recreational activities encouraged.

Regular habits of sleep and rest are essential to permanent cure. A warm bath and thirty-minute rest after a day of work will do wonders to reduce a tension state. Equally relaxing is a 20-30 minute walk in the evening. A cold shower each morning will tone up the circulation and nervous system and relieve the tired dragged-out feeling so many of these patients awaken with; and, at the same time, it seems to help balance the autonomic nervous system. Moderation in all things is to be encouraged. Coffee should be limited to one cup for breakfast and alcohol and tobacco reduced to a minimum.

As Bockus, in discussing the colon neuroses, has so ably written: "There is no medical disorder which makes greater demands on the physician's time and ingenuity than does this syndrome. The clinician, to be universally successful in the treatment of these patients, should possess the training of an experienced internist and psychiatrist and the wisdom of a philosopher. Those who approach the problem of the colonic neurosis with a sense of security and smugness, employing only routine stereotyped methods, are doomed to frequent failures."

THERAPY OF OBESITY*

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Obesity, according to Newburgh, may be defined as that condition of the body characterized by an abnormally large amount of adipose tissue. Life insurance companies and others have published tables of normal weights for respective ages and heights, with which we are all familiar. Upon these tables, taking into consideration 10 per cent deviation for the individual variations, we decide whether or not a given patient is obese.

There have been offered by various investigators many theories of the etiology of obesity. It was thought for example that most obese people had low metabolic rates. This is now known to be incorrect. Out of 180 cases studied by Grafe only three showed basal metabolic rates lower than normal. Strang and McClugage in painstaking experiments have demonstrated that obesity is not due to a lessening of the specific dynamic effect of food. Nenenschwander-Lemmer also demonstrated that obesity is not due to an abnormal economy of food ingested, nor is it due to the inability of obese people to release fat from adipose tissue. This was demonstrated by Malcolm Block and others, and by the same token obesity was found not due to any abnormal process of fat accumulation or storage. Obesity is not due to endocrine imbalance *per se*. We may have hypothyroidism and hypopituitarism without obesity. Even disease of the hypothalamus cannot be pointed to as the cause of obesity. Experiments on rats with injured hypothalami show that if the food intake of the injured and uninjured rats remains constant no obesity results. If the food is unlimited the injured rats consume more food and consequently become fat.

There is therefore but one fundamental cause of obesity, namely, that the intake of energy in the form of food exceeds the outflow or expenditure. This excess is stored in the form of adipose tissue.

Factors which operate in this process are multiple and will only be listed:

1. Heredity: Obesity is not inherited but eating customs and habits are. The obese family enjoys the habits of high caloric meals.

2. Constitutional changes such as occur at puberty and the menopause, at childbirth and lactation, cause a lessening of energy requirements but not in eating habits, hence frequently resulting in obesity.

3. Changes of occupation, such as from the participation in competitive sports to the sedentary life of office routine, again may upset the balance in favor of fat accumulation.

4. Orthopedic or other disease may suddenly reduce a patient's activity and favor obesity.

5. Psychologic maladjustment in which oral food gratification is substituted for some unobtainable craving is perhaps of greater importance in the etiology of obesity than any other of the aforementioned causes.

6. Unknown cause: We all have observed obesity whose cause cannot be so glibly catalogued. Why do appetites become abnormal? In many incidents we must confess clinical ignorance. It is hoped that further research in metabolism will solve this riddle.

In a study of 24 colored and 13 white patients made at the Endocrine and Obesity Clinic of the Medical College of Virginia Outpatient Department in 1944, we* found our average patient to be a woman 39 years of age, 5 feet 4 inches tall, weighing 223 pounds or 88 pounds in excess of normal. In many instances she was not overweight until after her marriage or after her first pregnancy. In general her family were all stout, her parents averaging 200 pounds with siblings also overweight. She consumed on the average of 4,000 calories a day. She usually ate two meals a day which is an interesting habit of most stout people. She cooked her vegetables with fat meat, ate heartily of hot breads, butter, margarine, fried meats, fried or mashed potatoes, rich desserts, coffee with cream and abundant sugar. She seldom ate fruit or green vegetables but ate between meals, and consumed up to six bottles of soft drinks in a day. Since these were not considered eating, specific questioning was necessary to elicit total caloric intake. In November 1944, this diet cost about $.75 a day.

Now in the management of this patient several factors seem to be of importance.

*Read in the Symposium on Therapy, sponsored by Department of Continuation Education, Medical College of Virginia, Richmond, February 18, 1947.

*Miss Marguerite L. Pettee, Chief Nutritionist, Medical College of Virginia Clinics, collaborated with me in this series of case studies.

In the first place the doctor wastes his time and the patient his or her money unless the patient actually wishes to lose weight. It is this lack of cooperation that spells failure in the management of many cases of obesity. We found that those who visited their physician regularly every two weeks lost weight more rapidly than those who came at greater or more irregular intervals.

The resolution, if possible, of any psychological quirk was essential. This should be explained to the patient fully and occasionally psychiatric aid is necessary. Any stout person, who eats to satisfy a craving which he or she cannot otherwise gratify, will not cooperate until this feature has been eliminated. Obesity and maladjustment form a vicious circle which must be broken. Persistence is necessary for no habit, with the possible exception of alcohol or drug addiction, is harder to break.

Obviously diet, diet, diet, is the key to weight reduction, and any other method is but chasing therapeutic butterflies. The diet should include one gm. of protein per kilo optimum weight, adequate vitamin and mineral intake. We have learned that it is better to prescribe a standard breakfast and supper or lunch, and permit the patient to eat unrestrainedly of 5 per cent fruits and vegetables and lean meats for the third meal. The standard breakfast consists of one egg or one lamb chop or two slices of bacon, one slice of toast with half a pat of butter, one cup of coffee without sugar or cream, and one small glass of milk; and the standard supper of one egg, one slice of whole wheat toast, and one helping of a 5 per cent fruit. Nothing but water is allowed between meals. One multivitamin capsule daily is given for maintenance. This diet amounts to around 1,000 to 1,250 calories a day. Three and a half pounds of weight is the maximum rate of reduction per week which is considered wise. If the patient conscientiously follows this diet, he will lose weight and in several weeks he finds his appetite less voracious and more readily satisfied. When this occurs the battle is half won.

In passing, it is appropriate to mention a few pseudoscientific methods of weight reduction which have been foisted on the public. Jad salts were supposed to be added to bath water to dissolve away the fat. The most ingenious nostrum was the gold capsule containing a tapeworm egg, which escaped in the stomach through a gelatin window after it had been swallowed. This sold for $10.00. I have recently seen a patient who attended a reducing course in a nationally known cosmetic parlor in New York. Here she was regimented for a period of two weeks by a diet chiefly of orange juice and mineral oil together with strenuous gymnasium exercise. She lost 15 pounds but quickly regained it after leaving the school.

Most proprietary reducing tablets contain thyroid and/or phenobarbital and benzedrine, and are sold with the impression that taking these pills makes dieting unnecessary. A well known grape juice company advertises the reducing benefits which accrue from using their product. Florida and California have their fadists who advocate everything from beet to sauerkraut juice in elaborately planned daily regimens. In a recent Richmond newspaper there appeared an advertisement for a nationally known bread with this astonishing headline, "'Melt' Fat Off By the Pound. 'Burn Off' Excess Fat On This Proved Medical Principle. No Starving! No Drugs! No Violent Exercise!" The body of the article then goes on to say, "You follow the scientific principle proved by doctors that to reduce safely (avoid acidosis) you must get at least a pound of carbohydrates—which provides 'the flame fat burns in'—for every pound of fat you burn off." The bread is also advertised to contain Vitamin B-1 which, according to the ad, is the one science has found necessary to help transform the carbohydrates in bread into "the flame fat burns in". Alas, the poor fat lady is besieged by as many bogus panaceas as is the alcoholic and usually with as ineffective results.

What about exercise? Sadly enough for most obese patients, we know that exercise contributes little to reducing. To work off one pound of fat it is necessary to expend 4,320 calories of energy. In practical terms this means such absurdities as walking 66½ miles, playing pingpong for 17½ hours, dancing, i.e., foxtrot for 16 hours, sawing wood for 10½ hours, and finally walking to the top of the Washington monument 48 times. Obviously exercise plays a very minor role and in stout persons, whose cardiovascular system is already overloaded, may be a very hazardous pursuit.

What about drugs? Thyroid extract is mentioned only to be condemned except of course when used in the treatment of hypothyroidism associated with obesity, and this association as we have previously stated is rare. Thyroid in nontoxic doses may increase an already pathologic appetite. Obviously in

toxic doses it is dangerous to the cardiovascular and nervous systems.

Amphetamine, either in the form of benzedrine sulphate or dexedrine sulphate, in doses of from 5 to 10 mgm., 30 minutes before meals, has a definitely depressing effect on the appetite and in addition favorably affects the mood and sense of well being of the patient. Dexedrine is probably the choice as its sympathetic stimulation is less marked. Patients cooperate much better if they are given a crutch in the form of a tablet to take than if they must rely on an unsatisfying diet alone. Atropine, in the form of the tincture of belladonna, one hour before meals, may also retard the appetite.

Certain gels, such as metamucil, mucilose, or mucara, given in one or two dram doses before meals, fill the stomach by their expanding bulk and not only assuage the appetite but aid in the control of constipation.

To reduce water retention which may impede weight loss, at certain times in the course of reducing, aminophylline in 3 grain doses before meals, ammonium chloride, 15 grains before meals, are helpful. They also tend to reduce the appetite. Occasionally the mercurial diuretics are helpful.

It must be borne in mind, however, that drugs without dietary management are valueless.

We have attempted to mention briefly exploded theories of obesity, true concepts of its etiology, and we hope we have at least focused attention to the best methods of management.

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Estimate Men Responsible for Barren Marriages in 30-50 Per Cent of Cases.

It is estimated that between 10 and 15 per cent of adult marriages are barren. In these the male is either a contributory or sole cause in 30 to 50 per cent of the cases, according to two San Francisco doctors writing in the July 12 issue of *The Journal of the American Medical Association.*

Lewis Michelson, M.D., Assistant Clinical Professor of Obstetrics and Gynecology at the Stanford University School of Medicine and Robin Michelson, M.D., studied a group of 855 barren marriages of which 519 husbands were found to have impaired fertility.

In 287 of the couples the physicians collected adequate data to analyze the relative fertility of husband and wife. They state that "this study offers a challenge to physicians, in that of these 287 couples there were 99, or approximately 34 per cent, in which both husband and wife were apparently fertile, as far as could be determined (in the present state of medical knowledge), and still no pregnancy occurred."

The physicians point out "that either husband or wife may be the sole cause or both may have minor defects the combination of which is sufficient to prevent conception. Consequently, one must not be satisfied with the finding of defects in one partner, but both husband and wife should be completely examined before an opinion is expressed as to the factors causing the infertility and the possibility of altering them."

"War or No War, Depression or No Depression,"—

Depression or no depression, in good times and in bad, Mead Johnson & Company are keeping the faith with the medical profession. Mead Products are not advertised to the public. If you approve this policy, Please specify *Mead's.*

THE DIAGNOSIS AND TREATMENT OF HERNIATED NUCLEUS PULPOSUS*

J. L. THOMSON, M.D.,
Norfolk, Virginia.

In recent years the entire concept of lumbago and sciatica has been changed because of a better knowledge concerning the anatomic and pathologic relationships of the intervertebral disc and intraspinal portion of the peripheral nerves in the lower lumbar region. Before the work of Barr and Mixter in 1937, sciatica had been treated as a severe type of rheumatism and inflammation of the sciatic nerve which sooner or later would improve of itself only to recur at intervals for many years. However, these writers showed that there was definite cause for the greater number of cases of sciatica, by demonstrating the anatomic relationship of the intervertebral disc and peripheral nerves as they leave the dura in the lower portion of the spine. We now speak of the symptom of sciatica as rupture of the annulus fibrosus with herniation of the nucleus pulposus, specifying the interspace at which the pathologic change has occurred. It would still be incorrect to state that all types of sciatica are caused by a herniated nucleus pulposus because it is well known that other lesions, such as pelvic tumors in the female, prostatic tumors in the male, cauda equina tumors, sciatic injury, peripheral sciatic tumors, and various types of inflammatory diseases and toxic conditions all cause sciatic pain. Therefore a careful history, physical and neurological examination are required for an accurate diagnosis of herniated nucleus pulposus.

To understand this syndrome clearly it is important to review the anatomy of the lower spine, and its relationship with lumbo-sacral plexus. An intervertebral disc is present at each interspace from the second cervical vertebra to the first sacral, making twenty-three discs in all. The disc consists of a cartilaginous portion which is contiguous with the bony surface of the vertebra above and below, in the center of which is the nucleus pulposus. A fibrous-like layer of tissue lying in strands, known as the annulus fibrosus, acts as a band around the cartilaginous plate enclosing the nucleus pulposus. The latter structure is a remnant of the notochord and lies somewhat closer to the posterior border of the disc. It consists of white fibro-elastic material, about 80 per cent water and, when displaced into the vertebral canal, has the gross appearance of crab meat. The posterior longitudinal ligament thins out considerably along its lateral border which accounts for the fact that the herniated nuclei are most frequently found beneath the lateral fibers where it offers the least resistance to the protruding material. The roots of the cauda equina float freely in the subarachnoid space except where the emerging root leaves the dura laterally at the middle of the body of the vertebra above and descends in a separate dural covering downward to make its exit from the canal at the interspace below. So each root is firmly fixed as it leaves the dura and cannot be displaced by the protruding mass without causing symptoms as can the roots of the subarachnoid space. The emerging root lies close to the upper border of the intervertebral foramen and therefore above the disc. Consequently, a posterior protruding nucleus pulposus will not affect the nerve leaving the same interspace but will make pressure on the nerve in the spinal canal that emerges from the next interspace below. As a rule the protruding material is large enough to make some pressure on the most lateral nerve fibers still in the subarachnoid space which will make up the second emerging root below. Therefore, a herniated nucleus pulposus at the fourth lumbar interspace will involve L_5 and S_1 roots, whereas a similar lesion at the fifth lumbar interspace will involve S_1 and S_2 roots. Due to the fact that the lower portion of the lumbar spine is much more mobile than other portions of the spine and because of the lordotic curve of the lower lumbar region, 96 per cent of cases of herniated nuclei occur between the fourth or fifth lumbar interspaces.

Low back pain per se has only recently been satisfactorily explained and is due to disturbance of the rich sensory network entering the annulus fibrosus. Roofe has shown histologically that sensory fibers come from just distal to a posterior root ganglion to re-enter the canal and travel downward two or three interspaces supplying the annulus fibrosus and posterior longitudinal ligament along the

*Read at the meeting of the Medical Society of Virginia at Virginia Beach, October 14-16, 1946.

way. Therefore, it is possible for low back pain to result from tearing of the annulus fibrosus, severing the sensory network, causing back pain only when the nucleus pulposus has not extruded through the tear in the annulus fibrosus. This accounts for the fact that the greater number of patients complain of low back pain for days or weeks before the onset of sciatica. With the foregoing facts clearly established, the clinical features of a herniated nucleus pulposus may be discussed.

A carefully recorded history alone is often sufficient to make a correct diagnosis and at times may even localize the interspace involved. Approximately 60 per cent of patients give a history of various types of back trauma, although this may be nothing more than twisting the back. Frequently the severe low back pain comes on suddenly while the patient is stooping over in the process of lifting an object and may be so severe that he is unable to stand erect for many days. A recent case—low back pain began while the patient was bending over a wash basin and suddenly sneezed. Many patients will give a history of several attacks occurring over periods of weeks or months with intervals of relief, only to have recurrence of pain more severe than the last. During an episode of pain, comfort is usually obtained by lying in bed with the involved leg flexed at both the hip and the knee. The most intense pain may be in the sciatic notch, thigh, popliteal space, calf, ankle or foot. Weakness is not a common complaint. Usually the patient confuses weakness with severe pain, which prevents normal motion. Paresthesias of coldness, numbness, tingling or lightning-like sensation are associated with pain and are of much greater diagnostic importance than the localization of pain. If straining, sneezing, coughing, or sudden twists of the back aggravate the paresthesia and pain a herniated nucleus pulpopus is very probable.

Inspection of the spine often reveals loss of normal lordotic curve and palpation shows marked spasm of the erector spinae muscles. Listing of the affected side takes place in order to shift the weight of the spine from the involved area. Not infrequently a tender area over the spinous process at the level of the involved vertebra is found on palpation. Positive jugular compression sign is added proof of encroachment on a nerve root. The test consists of bilateral compression of the jugular veins which may cause an accentuation of sciatic pain by the increased spinal fluid pressure pushing on and displacing the involved nerve root. The test is performed by having the patient stand erect and compressing the jugular veins just above the clavicles by encircling the neck with the hands or by placing a blood pressure cuff about the neck and raising the pressure in the apparatus to 40 mms. of mercury. If the test is positive the patient will complain of pain or paresthesia in the involved extremity and a negative test should not be accepted until the jugular veins have been compressed for two minutes. Finally, the most common finding is the positive Lasègue sign produced by flexing the thigh at right angles on the trunk and extending the leg on the thigh until intense pain results. Then by dorsiflexing the foot in this position, added pain is complained of because of further stretching of the sciatic nerve. Straight leg raising of the affected extremity exaggerates the pain by increasing the pull on the sciatic nerve. Frequently the same pain may be caused by only suddenly dorsiflexing the foot on that side.

It is of great help in the examination if the patient can outline the area of numbness and tingling along the calf and foot. This numbness is confined to the anterolateral aspect of the leg and great toe when the lesion is located at the fourth lumbar interspace or along the posterolateral aspect of the leg and dorsum of the foot and toes, sparing the big toe when the fifth lumbar interspace is involved. The ankle jerk is usually diminished or absent in the fifth lumbar interspace lesion and preserved when the lesion is above the level. This is the only reflex change found in an average case unless the knee jerk is altered in a 3rd interspace lesion.

Whereas in the early years of treating these cases a lumbar puncture was routinely performed as an aid to diagnosis, the procedure is now rarely done. This is because the greater number of verified cases show a total protein of less than 40 mg. per cent and is of no diagnostic help. Therefore in the typical case the patient is spared the anxiety of submitting to the test.

Since it is possible to make the diagnosis from the history and neurological examination in the greater portion of cases and accurately localize the lesion, it is only infrequently necessary to resort to contrast media injection into the spinal subarachnoid space. A filling defect of the opaque column at an interspace is not always conclusive evidence that a

herniated nucleus pulposus is present, because adhesions about the arachnoid in the cauda equina or deforming arthritis cause considerable confusion. When lipiodol or pantopaque is necessary for localization, only two to four cubic centimeters should be injected into the lumbar subarachnoid space. Larger quantities seem unnecessary and, if lipiodol is allowed to remain, may cause complaint of a heavy, pulling, or dull aching sensation at the tip of the coccyx which lasts for several weeks or months, or result in arachnoidal inflammation if pantopaque isn't removed. Most neurological surgeons feel that small amounts of either may remain in the canal without doing harm. However, it must be remembered that the material remaining in the spinal canal after a considerable interval, on fluoroscopic examination, may be seen along the nerve sleeves of the lower lumbar nerves actually outside the spinal canal. It is hard for a layman or even physician not accustomed to its use to believe that this material so diffusely scattered does not cause considerable harm to the patient. So a diligent effort should be made to withdraw all of the media at the conclusion of the x-ray examination.

The operative procedure for removal of herniated nucleus pulposus can be carried out under the anesthesia preferred by the surgeon. The anesthesia of choice is either spinal or local supplemented with intravenous pentothal sodium if needed. The operation consists of a small, well localized hemilaminectomy not disturbing the spinous processes, with removal of only a small portion of the laminae above and below the interspace. The ligamentum flavum is dissected from the bone and the epidural fat is removed, exposing the dura. A swollen nerve root displaced posteriorly is first evidence of an underlying herniated nucleus pulposus. The nerve and dura are retracted medially, exposing the smooth, glistening protruded tumor mass. A wide stellate incision made through the posterior longitudinal ligament over the mass generally allows it to extrude and the crab-meat-like material can be removed with gentle traction and manipulation. This allows the nerve to fall back in its normal position. Approximately 10 per cent of herniations occur at both the fourth and fifth interspace and in some clinics each space is explored routinely. Occasionally the herniation may occur more toward the central portion of the canal and then it may be necessary to convert the hemilaminectomy into a total laminectomy in order to remove the herniated nucleus either through a transdural incision or extradurally by completely displacing the dura toward the opposite side. The anterior and lateral vertebral veins occasionally cause troublesome bleeding, but may be controlled by electrocoagulation or small pieces of muscle or gel foam preparation. The wound is closed in layers with interrupted black silk without drainage. Often the patient is completely relieved of pain on recovering from the anesthesia. There usually is no trouble in voiding voluntarily following operation. Abdominal distension is seldom troublesome but, if it should exist, prostigmin should be given hypodermically. A general diet is usually well tolerated by the second post-operative day. Frequent movement of the legs and turning in bed is encouraged to prevent phlebitis and atelectasis, particularly in the older patients. The patient is allowed to sit up on the seventh to the tenth post-operative day, then walk, and may be discharged on the tenth to the twelfth day without any type of back support, as a rule. There is no cause for a weakened back following operation when the procedure is limited to a partial hemilaminectomy. Nor should a back fusion be done routinely, but this operation should be reserved for the small percentage of patients who do not derive complete relief from removal of the nucleus pulposus.

405 Wainwright Building.

DISCUSSION

DR. J. M. MEREDITH, Richmond: Dr. Thomson has explained very thoroughly the symptom-complex of herniated nucleus pulposus, and there is really nothing of importance to add to his presentation. There are some other points in the diagnosis of these herniated disks which sometimes puzzle us. I think the overall picture is that of an individual whose pain is both low in the back and down the posterior and lateral aspects of the leg to the foot or ankle. When we get an individual with those symptoms we should think of herniated nucleus pulposus.

We should take some time to examine these patients in the erect position. When you find a definite lordosis of the patient's lumbar spine, protruded disk is unlikely. Most of these patients have flat backs or lumbar scoliosis.

Dr. Thomson would, I think, if he had had time, have described cervical protruded disks as a condition causing pain in the arm and hand, either to the little-finger side or to the thumb. This is treated in like fashion; namely, the removal of the disk by hemilaminectomy.

Sometimes the reflexes show some changes. The practical surgical point is that when the pain is largely in

the ankle and in the foot we invariably today look at both the fourth and fifth lumbar interspaces; and if the patient has definite pain in the anterior thigh, with diminution in the knee jerk, then it is incumbent upon the surgeon also to look at the third lumbar interspace, which prolongs the operation slightly.

It is necessary to take X-rays of the lower spine in all these cases. One must be certain that metastatic disease is not present.

The recurrence rate is very low; certainly not more than one or two per cent to the degree that operation again is required. More rarely still it recurs in the opposite leg. Personally I recall only one or two that I have seen that had pain in the other leg requiring operation at a later date.

It is well, perhaps, to realize the extent of time involved when these patients are operated upon—the time away from work. We usually tell them that they will remain in bed two weeks and be ambulatory for another three weeks. They usually must plan to remain away from work five or six weeks.

The operation is not so formidable as it was a few years ago. A small amount of bone is removed, and the disk is extracted extradurally without weakening of the spine.

Just a word about the end results, because after all it is that in which we are all primarily interested now. It was just about 12 years ago, I believe, that this syndrome was first elucidated by Mixter and Barr, in Boston, as the cause of sciatica in a large number of cases. It is possible we have all been expecting a little too much from the procedure. It is not one hundred per cent curative by any means; but when we recall that up to about 1934 these patients with backache and sciatica were treated by a variety of other methods, sometimes with satisfactory results and sometimes with indifferent results, I think that today, when the offending lesion is actually removed, our overall results are much better.

In conclusion, there have been three recent surveys made, of military cases and cases in private civilian practice, each series involving several hundred cases. About fifty per cent of these individuals who are operated upon consider themselves cured—just as well as before the pain developed—and are back at their former work; others are doing light work only.

The fusion operation is reserved for the great minority of cases; from three to twelve per cent are fused in various clinics because of related spondylolisthesis or other orthopedic lesion. It adds somewhat to the operation, and certainly the time in hospital is prolonged. I think that fusion today is reserved largely for the cases in which the orthopedist who follows or first sees the case thinks fusion should be done.

Postgraduate Course in Diseases of the Chest.

The American College of Chest Physicians is sponsoring a second annual postgraduate course in diseases of the chest to be held during the week of September 15-20, at the Municipal Tuberculosis Sanitarium, Chicago, Illinois.

The emphasis in this course will be placed on the newer developments in all aspects of diagnosis and treatment of diseases of the chest. The course will be limited to 30 physicians. Tuition fee is $50.00.

Further information may be secured at the office of the American College of Chest Physicians, 500 North Dearborn Street, Chicago 10, Illinois.

Combination of Drugs Effective for Ulcerative Colitis.

Patients with chronic ulcerative colitis, an infectious disease of the large intestine, were effectively treated with penicillin taken by mouth and an intestinal sulfonamide, phthalylsulfathiazole, according to Michael H. Streicher, M.D., of Chicago.

Writing in the May 24 issue of *The Journal of the American Medical Association,* Dr. Streicher, who is assistant professor of medicine, University of Illinois College of Medicine, treated 45 patients with this disease.

The author points out that the combination of drugs was very effective because such infectious agents as the staphylococcus, which is responsible for boils, and the streptococcus, which causes "strep" throat, are present in the intestines in ulcerative colitis.

Some factors which predispose to invasion by the organism causing this disease have come to be recognized. The most common of these infections of the upper part of the respiratory tract, including tonsillitis, cranial sinusitis, bronchitis and pneumonia.

THE MASKING OF SYPHILIS BY PENICILLIN
Report of a Case

JAMES M. SUTER, M.D., M.P.H.,
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Abingdon, Virginia.

Penicillin, today, is being widely used for the treatment of both gonorrhea and syphilis. As a result of the effectiveness of penicillin on both the gonococcus and the Treponema pallida, the accurate diagnosis of early syphilis has been complicated. When a double infection is acquired at the same exposure, and this occurs in about 1.4 per cent in males and 3 per cent in females,[1] there is a great possibility that the syphilis symptomatology will be masked by the treatment of gonorrhea. The incubation period of gonorrhea is from two to five days while the incubation period of syphilis averages about twenty-one days, but can be as short as ten or as long as ninety days. Thus, it can be easily seen that administration of 300,000 u of penicillin in oil and beeswax for gonorrhea could easily mask the obvious (primary and secondary) symptoms of syphilis and send the case into a period of latency with no external manifestations. This was early recognized by several writers.[2] Later experience, as shown by Romansky,[3] that 300,000 u of penicillin in oil and beeswax will render a primary lesion of syphilis free of all Treponema helped confirm this. This has been further confirmed in the work in the Venereal Disease Clinic, Abingdon, Virginia. Recently, two cases of primary syphilis, proven by positive darkfield examination, were each given 300,000 u of penicillin in oil and beeswax and subsequent darkfield examinations, after twenty-four hours, were all negative.

In a recent letter to all physicians,[4] the Syphilis Committee of the Medical Society of Virginia recommended that, after 1cc of penicillin in oil and beeswax, patients be placed on observation status with instructions to return on the third, seventh and twenty-first past treatment days. It also further recommended that these patients be given a serologic test on the twenty-first, sixtieth and ninetieth days after treatment to detect coincident syphilis that might have been acquired in the same sexual exposure.

In an article in the *Journal of Venereal Disease Information,* July 1946, Fromer et al. further confirm the work of Leifer and Martin that the occurrence of fever, chills and malaise which develops during the course of therapy of gonorrhea is strongly indicative of a dual infection.

Presented herewith is a case, recently diagnosed in the Venereal Disease Clinic, Marion, Virginia. It is believed that in this case there was a dual infection and that the syphilitic manifestations were masked by the treatment of the obvious gonorrheal infection.

CASE 1. L.M.P. W.M.27

Chief Complaint: Moderately profuse urethral discharge, several days' duration, May 1946. Patient was given 100,000 units sodium penicillin, 20,000 u q.3.h. The patient stated that while he was being treated he felt slightly flushed and later had feelings of chilliness. The symptoms were not severe, but the patient had been perfectly well up to time of disease and felt well after course of penicillin. Repeated blood smears were negative for malaria. Several Standard Tests for Syphilis were done, one at time of infection and one thirty days later; both were negative. However, sixty days later, the blood was strongly positive on repeated tests. No primary or secondary lesions had been noticed. Spinal fluid at this time was negative.

CONCLUSIONS

1. Further evidence is presented that the occurrence of chills, fever and malaise while treating gonorrhea with penicillin in oil and beeswax may indicate a concurrent syphilitic infection, which will enter a period of early latency, and will show no primary or secondary manifestations.
2. All cases of gonorrhea treated with penicillin in oil and beeswax should be adequately followed up to eliminate the possibility of a concurrent syphilitic infection, particularly, if chills, fever and malaise are noted.

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4. Memorandum to all Physicians from L. J. Roper, M. D., State Health Commissioner; Subject, Free Distribution of Penicillin In Oil and Beeswax.

Hospital and Health Facilities May Be Expanded With Federal Aid.

Under the appropriations act signed by the President on July 8, Thomas Parran, Surgeon General, U. S. Public Health Service, Federal Security Agency, announced that construction of 225 million dollars' worth of hospital and health facilities during the fiscal year of 1948, ending June 30 next year will be possible. Although no Federal funds were directly appropriated for this purpose, Dr. Parran says the act sets up a procedure, patterned after the program of Federal aid for highway construction, which obligates the Federal government to pay up to $75,000,000 as its share of approved hospital construction. Since the Federal government pays one-third of the cost, this brings the potential combined total of Federal, State and local funds to $225,000,000. Under this arrangement, States need not delay their hospital construction plans since they have the assurance that any construction project approved by the Surgeon General creates a contractual obligation on the part of the Federal government to meet its one-third share of the cost.

This legislation implements the construction phase of the Hospital Survey and Construction Act passed by Congress last year, authorizing the appropriation of three million dollars for survey and planning and 75 million dollars for construction annually for five years. Two and a quarter million dollars was appropriated last year to assist the States in surveying existing hospital facilities. The 75 million dollars just appropriated for the fiscal year 1948 is the first money to be made available for construction. Funds may be used for health centers, laboratories, clinics and other medical facilities, as well as for hospitals.

All States and territories, including the District of Columbia, are conducting inventories of their hospitals and health facilities. So far three State construction plans have been approved and it is expected that more than half of the States will have submitted their plans by fall. The States whose plans have been approved are Indiana, Mississippi and North Carolina.

New Books,

Recently received by the Library of the Medical College of Virginia, available to our readers under usual library rules are:

Buchsbaum—Methods of tissue culture in vitro.
Cecil—A textbook of medicine. 7th ed.
Christian—Osler's principles and practice of medicine. 16th ed.
Clayton—Electrotherapy with direct and low frequency currents.
Horner—Dental education today.
Jordan—Textbook of histology. 8th ed.
Lemon and Ferrance—Analytical and experimental physics.
Lund *et al*—Bioelectric fields and growth.
McIntyre—Curare: Its history, nature and clinical use.
Pijoan—A handbook of commonly used drugs.
Planck—Treatise on thermodynamics.
Schiff—Differential diagnosis of jaundice.
Tassman—The eye manifestation of internal disease.
Whyte—The next development in man.
Wolf and Wolf—Fungi.
Yearbook of neurology, psychiatry and neurosurgery—1946.

AN INTERNATIONAL DRAMA*

JOHN BELL WILLIAMS,
Richmond, Virginia.

For about twenty minutes, now, let us pretend that we have just entered a theatre where every seat is filled with anxious people. The lights overhead are gradually dimmed as the curtain slowly rises on:

ACT I

The first scene carries us to Italy toward the close of the eighteenth century. The first character—a lady, the wife of a professor—is busy in her husband's laboratory among a number of students who are working with an old-time electrical machine. She is ill, and is herself ruefully skinning frogs which she has condemned to make into soup and take as medicine, frogs being the fashionable substitute at that stage of the medical sciences for codliver oil. Of a sudden she sees the legs of one of her frogs begin a rapturous dance. Naturally, she is astonished and desires an explanation of the performance. The students consider that it is sufficiently well accounted for by the pure cussedness normally inherent in frogs, but this theory does not satisfy the lady. Impelled by what we call in men a love of knowledge and in women female curiosity, she relates the circumstance to her husband, a man of science, and engages his interest in the solution of the mystery. The lady is Madame Galvani, and she makes a discovery which is to transform the world, for she sees the birth of dynamic electricity.

Thus she becomes the first intellectual being for whom Nature had deigned to unveil this phase of her deeper mysteries; and all unknowing that in the twitching limbs of that humble frog lay the promise and the potency of the telegraph, the telephone, the dynamo, the trolley car, the electric lamp, and the other mighty wonders which electricity has wrought.

ACT II

As the curtain rises for Act II we find ourselves in Merrie England. A man named Crookes holds the stage. He charms the audience by producing a magical glow within the interior of a tube. But he is not a magician; he is deadly serious, and attributes the glow, not to what is vaguely called electric light, as the audience thought, but to matter itself—to a bombardment of the glass by minute particles rushing against it at an enormous speed. His views are much disputed by other actors, but he stands his ground and insists that they are not solid, nor liquid, nor gaseous, and do not consist of atoms. Now enters Sir Oliver Lodge. He defends Mr. Crookes by going even further in proclaiming that they "consist of something much smaller than the atom—fragments of matter, ultra-atomic corpuscles, very much smaller, very much lighter than atoms, things which appear to be the foundation stones of which atoms are composed."

The phenomena of the Crookes' tube are then repeated and discussed. The spectators are flooded with the x-rays which stream from the tube, but no one knows this. They are excited to see what is going on inside the tube, but it does not occur to them that something might be happening on the outside as well. Lenard, a German, then takes a hand. He exhibits rays which pass through certain opaque objects, but he is one of the set of scientific prigs which glorifies abstract science and snarls at its practical applications, and which thinks that the man, who prints an algebraic rigmarole to elucidate some futile but hidden property of steam, is far more deserving than the man who invents a steam engine and puts it to work. He expounds his observations. They are noted by his brethren as to their bearing on various theories and speculations, but that they could be utilized to locate a bullet in the depths of the body is an idea too practical for them to entertain. The curtain falls upon animated but serious thought.

ACT III

Act III is staged in the year 1895, in Germany, where Professor Roentgen independently demonstrates the same facts. Working with a Crookes' tube and using a peculiarly prepared screen, he exhibits genuine sleight of hand by showing the audience the bones of his own hand through the flesh. He next subjects his pocketbook to the same strange rays. This "brings down the house" for through the leather they see money. Then, indeed, the overwhelming magnitude of his magic bursts upon them, for to hit upon a contrivance capable

*Read before the Section on History, Richmond Academy of Medicine, March 11, 1947

of revealing cash in a college professor's pocketbook is clearly an achievement, the importance of which is of the very first magnitude. The curtain falls amid great applause.

ACT IV

Act IV is laid in France. Becquerel, a French actor, is on the stage. He is working with uranium and demonstrates that it emits rays having characters much like those of the rays coming from the Crookes' tube. He proves this by placing a piece of uranium together with an object and a photographic plate in perfect darkness and then exhibits an image of the object on the plate.

At this point the spotlight is thrown on a native of Poland—Madame Curie. With excited interest she sees that different specimens of uranium vary much in their photographic and electrical activities, and conceives the idea that the active substance is not uranium itself, but something associated with it. This idea she works out at great cost, with manual and mental labor inexpressible, and at last this self-denying, persevering, and learned woman is rewarded with the discovery of a new element with characters so strange, and apparently so greatly at variance with principles long believed to have been established as to make the audience stare and gasp.

INTERMISSION

The curtain falls. An extremely long intermission follows as the scientific world discusses the remarkable romance of the play and demonstrations throughout the universe make it an international affair.

In the first place, it was considered that, in speaking of the characteristics of radium, they were not entirely accurate. When the term *radium* was used, such use, unless they were obviously precise in their language, was provisional and for convenience, and they were in fact speaking of the bromide of radium or of some analogous salt of the metal. These salts in the ordinary physical and chemical relations, the workers found closely resembled the corresponding salts of barium, but they also possessed properties that were unique.

They detected in the radiations shot out by radium three kinds of rays which they named alpha, beta, and gamma. The alpha and beta rays were actual particles of matter; the gamma rays were not matter but were attributable to waves in the ether analogous to the waves by which the phenomena of light was customarily explained, and was apparently our familiar x-rays. The particles constituting the alpha rays differed from the particles constituting the beta rays in their size, which was greatly larger; in their velocity, which was much slower; in the ability to pass through obstacles, which was far less, and in their electrical state, which was positive. The extremely minute, rapidly moving, penetrating, and negatively charged beta particles were, in fact, identical with the cathode stream in the Crookes' tube.

In addition to its radiations, they discovered that radium emitted a kind of vapor called its emanation, but which seemed to be compounded of several emanations, each having its peculiarities. Perhaps a satisfying notion of the state of the case was obtained by comparing the emanation to the vapor which rose from hot water, and the radiations to the rays of heat which the water gave off.

By means of its emanations radium communicated some of its properties to neighboring objects, an effect called induced radio-activity.

In order to convey a distinct idea of the peculiarities of radium they knew of no better way than to regard radium as a bit of the active sun substance itself. Its analogy to the sun was indeed very close, for it generated and emitted light, heat, and electricity; it photographed and affected the skin and subjacent tissues of the human body with a kind of sunburn. Some of its capacities, for instance, its ability to produce x-ray effects, were not directly observable in the sunbeam, yet all of them could, by indirect methods, be derived from it. But, especially, radium was found to do all these things apparently without outside help, creating its own energy, ever burning, never consuming—like the sun.

Instances of bodies capable of exhibiting one or another of most of these characteristics were sufficiently numerous. But hitherto, in all cases, the sequence of cause and effect had been clearly evident and there was no infraction of the principle of the conservation of energy, which asserts that energy must be begged, borrowed, or stolen, but cannot be created.

The intermission continues. Some of the performances of radium, while of profound interest from the standpoint of science, were found to be of a nature not suitable for the stage. Noted early was its continuous manufacture of heat, persistently keeping itself about four or five degrees Fahrenheit

hotter than its surroundings, which exploit it performed without fuel, without undergoing any change of composition, and without consuming itself—spontaneously, that is. The quantity of heat which it perpetually evolved in this strange manner was truly surprising. It was enough to enable the radium to melt considerably more than its own weight of ice each hour, and to do this hour after hour and day after day without perceptible loss of its own substance. A yet more striking idea of this capability was given by comparing it with a combustible substance. Thus, a pound of coal in burning set free energy sufficient to raise one pound vertically about 2,000 miles, but a pound of radium, without burning, but spontaneously manufactured energy sufficient to raise one pound about 2,400 million miles; and it was calculated that 15 pounds of radium was capable of keeping a one-horse-power engine continuously at work for several centuries.

On its physiological side they noted that, when it acted on the brain and spinal cord of certain animals, paralysis and death ensued, and that when its emanations were breathed by small animals the animals were killed, and the body of an animal thus killed, became radioactive and could impress a photographic plate. Radium affected plant life also, turned the leaves yellow and withered them, but, while it impeded the development of microbes, it did not do so very actively.

As radium spontaneously charged itself with heat, so it was able to charge itself with electricity; and was the first example of a body which possessed this power. Madame Curie and her husband observed that a specimen which had been enclosed in a glass vessel had accumulated enough electricity to rupture the glass, exhibit a spark, and give a shock.

ACT V

Act V opens with the stage darkened. There follows a very gruesome, sort of ghostly display with radium causing a curious glow of fluorescence or phosphorescence in a large number of substances. In some respects it is very beautiful and impressive. Among the substances used are the salts of the alkaline and alkaline-earth metals, paper, cotton, glass, zinc sulphide, and several other minerals. A very striking display of this ghostly attribute was observed when, bearing a fragment of radium bromide, the actors passed in nocturnal procession by a row of minerals and saw many of the minerals do salutation to the kingly element by lighting their fires at its approach.

The stage is then lightened. Radium is also shown to produce a number of spectacular chemical effects. These are changes of color in the bodies on which it acts. Thus, under its influence glass becomes brown or violet colored, and white salts of the alkaline metals turn blue, green, yellow, or brown. Paper is scorched and rendered brittle, and is, besides, pierced with perforations. Yellow phosphorus is changed into the red variety, and the oxygen of the air into ozone. Water is decomposed into its constituent gases, while radium emanations change the color of diamond and crystallize diamond itself into graphite.

Like the rabbit in the hat, the most astonishing feat of the act is radium's ability to disappear! Radium emanations are sealed up in a tube, and, when examined, helium is there—the radium is gone!

ACT VI

The curtain rises for Act VI. The year is 1905; the place—a crowded amphitheatre in the old, the original, the unrestored, Egyptian building of the Medical College of Virginia. The sole actor is Dr. William H. Taylor,* physician, Confederate soldier, teacher, coroner, naturalist, chemist, and, not being a specialist, he also knows many other things, including physics. He delivers a long, fascinating and scholarly lecture on radium.

The paper I have just read was taken from this ten-thousand-word lecture of Dr. Taylor—by selecting and piecing together portions, using his exact words, and condensing them into a two-thousand-word play for your diversion.

To be sure that the facts were brought up to date, I requested Dr. John W. Moore, a physicist now teaching at the Medical College of Virginia, to go over this sketch for the purpose of comparing Dr. Taylor's statements with modern knowledge. The kind cooperation of Dr. Moore resulted in only one change. He pointed out that Dr. Taylor, in discussing the heat that radium evolves, stated that this goes on and on without "perceptible" loss of its own substance, and that his lecture could be brought up to date by merely changing the word "perceptible" to "appreciable"!

Dr. Moore added this comment: "Only in recent

*De Quibus, by Wm. H. Taylor—Bell Book and Stationery Co., Richmond, Va.

times has it become clear that energy alone is not conserved but that mass-energy is conserved. This was shown by Einstein in his famous equation relating mass and energy: "Energy equals Mass (Velocity of light) squared." Thus, according to Dr. Moore, "radium actually uses up a tiny amount of its mass and gives off corresponding high energy emanations." To further quote Dr. Moore, "The analogy between radium and the sun still holds since the above process also takes place in the sun."

ACT VII

Scene 1

For Scene 1 of Act VII we return to Germany. The world is at war. A woman, Dr. Lise Meitner, is driven out of the country by Hitler, and in great irony she brings to America useful secrets regarding uranium and the development of the atomic bomb.

Scene 2

Scene 2 of this final act is hemispherical. The stage itself seems to disappear! The concussion of a mushroom blast resounds around the world from Hiroshima. The people are in a daze, staggering between a sharpened intellectual vision and utter darkness. And there the world stands today.

EPILOGUE

In summarizing Dr. Taylor's paper we are struck with four outstanding features:

First, the vast amount of accurate knowledge Dr. Taylor acquired between 1898, when radium was discovered, and 1905, when he delivered this lecture.

Second, that men of so long ago in passing through a museum saw, as he said, metals saluting radium by lighting their fires at its approach.

Third, that they predicted the split of the atom—to quote Dr. Taylor's words, "breaking it into a multiple of fragments."

And fourth, the readiness with which this newly acquired knowledge of radium was harnessed for good instead of for evil use. And now that the prophecies implied in Dr. Taylor's lecture have materialized into this so-called Atomic Age, man's ever recurring opportunity for choosing between good and evil has revived that age old conflict on still another plane.

My purpose in presenting you this condensation of such a remarkable lecture by such a remarkable old man is with the hope that it may inspire a modern Dr. Taylor to add new luster to Richmond's illustrious past.

McGuire Clinic, St. Luke's Hospital.

Music In Treatment of Disease.

With the approval of Surgeon General Thomas Parran of the United States Public Health Service, Dr. R. C. Williams, Assistant Surgeon General has accepted appointment as a member of the Board of Directors of the Music Research Foundation, Inc., a non-profit organization which has for its purpose the study of the use of music in the treatment of disease. Dr. Williams will act as Chairman of the Executive Committee of the Board of Directors.

There has been marked interest in the use of music in the treatment of disease for a number of years, and during World War II there was a decided revival of such interest.

It is proposed that a program of scientific inquiry into the therapeutic use of music be initiated. Selected psychiatrists will conduct investigations into the kind of music which has most therapeutic value and the types of mental patient most responsive to its use.

Through the use of fellowships, the Music Research Foundation, Inc., will conduct and initiate special psychological studies. In addition, it will establish grants or fellowships to compile present knowledge of the subject.

The Executive Secretary of the Foundation is located at 2909 Stanton Ave., Silver Spring, Md. Reprints of scientific and general articles on this subject are now available without cost.

THE SIGNING OF DEATH CERTIFICATES UNDER VIRGINIA LAW

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Richmond, Virginia.

Inquiries which have followed the issuing of recommendations by the Office of the Chief Medical Examiner of Virginia[1] regarding the signing of death certificates indicate a general impression that the General Assembly in enacting the 1946 coroner law[2] also revised the laws relating to vital statistics. Unfortunately, such a revision, although needed, was not made. In fact, no essential change has been made in the provisions governing the signing of death certificates since the first enactment of such laws thirty-five years ago. The instructions in question, therefore, out of necessity were based upon the laws of 1912. These statutes are still in force despite the fact that certain of the regulations have out-lived their reason and custom has modified the entire death certifying procedure.

The evolution since 1912 of practices contrary to the provisions of the Virginia Code makes it clear that these early laws either have been overlooked during recent years or intentionally discarded for purely medical reasons.[3] It is also probable that the subject did not receive legislative attention during these intervening years. While at first glance it may appear incongruous to propose a return to an outmoded form of death-certification merely on the basis that it has the advantage of statutory sanction, there are impelling legal considerations that require a strict adherence to such statutes until they are repealed or amended.

These early and now objectionable laws as enacted in 1912[4] carried the stamp of approval of a majority of the medical profession and of state and federal agencies concerned with public health and records. They were written and endorsed in the light of conditions then existing and followed a more or less uniform pattern throughout the nation. They provided that the medical certificate of death should be made and signed by the physician, if any, last in attendance.[5] If there was no physician in attendance, however, the designation of the proper person to sign the certificate would vary, depending upon whether or not the death resulted from "unlawful or suspicious means" and other considerations. Thus, it was stipulated that the registrar, after being notified by the undertaker of a death without medical attendance, should notify the nearest member of the county board of health who then should investigate and certify the death within twenty-four hours. If such member of the board did not do so within the required time, the law specified that the registrar should complete and sign the certificate "from the statement of relatives or other persons having adequate knowledge of the facts." But, if the death, in addition to being one without medical attendance, was found to be due to "unlawful or suspicious means", the law directed that the local registrar should notify the coroner of the death and in such cases only should the coroner complete and sign the certificate.

The act of 1912 made no provision for the certifying of deaths within the cities of the Commonwealth. In 1924 this omission was corrected by amending the act to provide that in the cities of the Commonwealth all such cases of death without medical attendance should be referred to the coroner for immediate investigation and certification.[6] No further change in these statutes was made after 1924 and, as noted preceding, the new coroner law took no account of the vital statistics law as it now stands.

1. General instructions to Coroners, Office of the Chief Medical Examiner of Virginia, Richmond, (June) 1947.

2. Acts of Assembly (Virginia), 1946, Chapter 355, pp. 595-602; 1946 Cumulative Supplement to the Virginia Code of 1942 (annotated), Chapters 72, 112 and 190A.

3. Explicit directions for the signing of death certificates were circulated among funeral directors, physicians and registrars by the State Department of Health shortly after the 1912 law became effective. See the Virginia Health Bulletin, vol. iv., Annual Report, 1912, pp. 145-177.

4. Acts of Assembly (Virginia), 1912, Chapter 181, pp. 440-450. For the background of the first vital statistics law see the Virginia Health Bulletin, vol. iv., Annual Report, 1912.

5. "Medical attendance" has not been defined further by statute or by courts of record. The State Department of Health in 1912 stated: "The law does not contemplate that (physicians) should withhold their signatures when a death occurs in a family which they attend if the cause of death is reasonably sure and above suspicion." The Virginia Health Bulletin, vol. iv., Annual Report, 1912, p. 171.

6. Acts of Assembly (Virginia), 1924, Chapter 334, p. 499.

Under the vital statistics laws now in force[7] the signing of death certificates must proceed as follows:

Attending physicians: If in attendance at the time of death, the physician[8] must sign the certificate regardless of the cause and manner of death and irrespective of investigation by the coroner. The new coroner law requires that certain deaths[9] be reported to the coroner by the attending physician, but despite this requirement, the vital statistics law gives the coroner no authority to complete and sign the certificate of death at the conclusion of his investigation.

Coroners: In *cities* of the Commonwealth, the coroner is required by law to sign the death certificate in *all* cases where a physician was not in attendance at the time of death.[10] In *counties* the coroner is required to sign the death certificate only when the death is referred to him by the local registrar as one resulting from "unlawful or suspicious means" and no physician was in attendance, both conditions concerning medical attendance and means of death being present. It should be noted, however, that under the new coroner law the coroner is required to investigate and take charge of the body in all deaths where no physician was in attendance, but his duty with respect to the signing of the death certificate depends upon other considerations not included in the new law, but which are covered by the vital statistics law.[11]

County registrars and members of the county health boards: In all other county deaths without medical attendance not referable to the coroner for the signing of the certificate as noted preceding, the nearest member of the county health board must investigate and certify the death within twenty-four hours, but if he does not, the registrar is authorized to complete and sign the certificate upon "the statement of relatives or other persons having adequate knowledge of the facts." The coroner under the 1946 coroner law, however, must investigate the death *regardless* of who signs the certificate of death.

Provisional certificates: The Acts of Assembly for 1922 added a section to the vital statistics laws providing that "if for good reason the doctor's or coroner's certificate of death, or that of the person acting as coroner, cannot be obtained, the . . . undertaker shall file with the local registrar a provisional certificate of death upon which the registrar shall issue a burial-transit permit.[12] The 1912 vital statistics act also made exception of "sparsely settled districts" designated by the local board of health, allowing burial without permit in such areas and merely stipulating that the certificate should be filed within ten days.[13] The State Department of Health in the same year, however, indicated its view that this provision would "seldom have to be invoked."[14]

In the case of deaths required by law to be investigated by the coroner,[15] regardless of the proper source of the signature appearing on the death certificate, funeral directors are at the present time prohibited by law from embalming or cremating a body until the permission of the coroner is obtained.[16] This provision in its effect eliminates the possibility of burial without permit as contemplated by the preceding sections of the vital statistics law, except in those deaths where an attending physician certifies that death was due to "natural causes".

Penalties: Included among the laws of 1912 and 1924 which have been carried forward into the Code of 1942 in connection with the signing of death certificates are provisions for penalties upon physicians who (1) refuse or neglect to complete certificates when required by law to do so (conviction carries

7. Virginia Code of 1942 (annotated), Chapter 66, Sections 1565, 1570, 1580 and 1581. These sections essentially are the laws of 1912; see notes 4 and 6 *supra* and note 12 *infra*.

8. The term "physician" means any person licensed to practice medicine, homeopathy, osteopathy, chiropractic, naturopathy or chiropody. 1946 Cumulative Supplement to the Virginia Code of 1942 (annotated), Chapter 68. See note 5 *supra* regarding "medical attendance". Stillbirths attended by midwives under Virginia law are deaths without medical attendance.

9. Deaths (1) by violence, (2) suddenly, of a person in apparent health, (3) in prison, and (4) by suspicious, unusual, or unnatural means. Acts of Assembly (Virginia) 1946, Chapter 355, section 4806-i; 1946 Cumulative Supplement to the Virginia Code of 1942, Chapter 190A, section 4818 (9).

10. See note 5 *supra*.

11. It is important to note that where the death is merely one without medical attendance the primary purpose of the investigation by the coroner is not the completing of the death certificate, but the collecting of evidence in broad terms of public interest. In those cases where the coroner is authorized to complete the certificate after his investigation this is only an incidental and subordinate duty.

12. Acts of Assembly, (Virginia) 1922, Chapter 441, pp. 767-768.

13. Note 4 *supra*. Virginia Code of 1942 (annotated), Chapter 66, section 1565.

14. The Virginia Health Bulletin, vol. iv., Annual Report, 1912, p. 219.

15. See note 9 *supra*. Coroners are required by law to be notified also of any deaths without medical attendance.

16. Acts of Assembly (Virginia), 1946, Chapter 355, section 1727; 1946 Cumulative Supplement to the Virginia Code of 1942 (annotated), Chapter 72, section 1727.

a penalty of not less than $5 nor more than $50, or (2) who file a false certificate of death (conviction carries a penalty of not less than $50 nor more than $200).[17]

The procedure thus required under the Commonwealth's thirty-five year old vital statistics law has been modified by custom to allow the coroner to complete and sign a certificate of death in any case where it is his duty to investigate the cause and manner of death. Attending physicians frequently assume that it is the duty of the physician in such cases to refuse to sign the certificate and insist that the coroner certify deaths by accident, suicide, homicide or those in which the exact cause of death is unknown or in which an element of suspicion appears. In some instances disputes concerning the *cause* rather than the *manner* of death have led to the practice of supposing erroneously that the law makes it a duty of the coroner to determine the *exact* cause of death for the primary purpose of recording adequate vital statistics. County registrars naturally have shown an increasing reluctance to intrude themselves into the purely medical field and members of county boards of health advance the view that there is no purpose in the practice of duplicating a coroner's investigation.

Such custom now has the advantage of being an established practice of much merit, and while the law it violates is susceptible to criticism from many viewpoints, both medical and non-medical, the fact remains that the coroner does not have the legal duty or authority to certify every death which he is required to investigate. A certificate of death, when signed by the proper person as required by law, is a legal document of many uses, and is submissible in evidence in a court of record as *prima facie* proof of the facts stated therein.[18] When the coroner completes and signs the death certificate where it is not within the scope of his duty and authority to do so, such a document is worthless from a legal viewpoint and ultimately hinders the proper administration of justice.

From a medical point of view this may be interpreted as a purely legalistic approach. Admittedly, registrars of vital statistics today are at a distinct disadvantage in complying with the medical requirements of the 1912 law; attending physicians are not likely to extend their inquiry into unlawful, unnatural or suspicious deaths in the degree contemplated by attorneys, police or coroners. Yet, a death certificate must be satisfactory as judged by *legal* as well as *medical* standards. If existing laws make it probable that such a document will be objectionable and controversial from either point of view, efforts should be made to coordinate the interests of the medical and legal profession in remedial legislation.

17. Virginia Code of 1942 (annotated), Chapter 66, section 1581.

18. 93 A.L.R. 1342; 159 A. L. R. 171; Cooley, R. W., Briefs of the Law of Insurance, ed. 2, vol. 6, pp. 5466-5468, 5477-5478; Couch, G. J., Cyclopedia of Insurance Law, vol. 8, section 2200, p. 7111 ff., sections 2225-2229, p. 7213 ff.; Virginia Code of 1942 (annotated) Chapter 66, section 1580; Richardson, O., and Breyfogle, H. S. Medico-legal Problems, Ann. Int. Med. 25: 22-66, 1946. Concerning the admissibility of death certificates and all of the statements contained therein, see 17 A. L. R. 1454; 96 A. L. R. 325; Couch *op. cit. supra*, vol. 8, p. 7232.

Floral Eponym (53)

GOMESA

BERNARDINO ANTONIO GOMES, 1769-1824

This Lisbon surgeon was born in Arcos in 1769, the son of a doctor. He studied in Coimbra, becoming a doctor of medicine in 1793. In 1797 he went as a naval surgeon to Brazil where he became engaged in botanical and pharmacological studies.

He introduced vaccination into Portugal and was also interested in, and wrote treatises on typhus fever and elephantiasis. Gomes died in Lisbon January 13, 1824.

Gomesa are Brazilian tree-perching orchids, little known in cultivation.

THE FORUM

The Family Doctor.

In the last several years much has been expressed in lay as well as professional circles regarding the preservation of the family doctor. Recent issues of *The Journal of the American Medical Association* have concerned themselves with this subject, and it has been discussed in many of the local societies. The American Medical Association unofficially lent its support to a study of this problem, and at the San Francisco convention in 1946 sponsored a get-together of a group of men interested in general practice.

During the recent American Medical Association Convention in Atlantic City, results of the San Francisco meeting became evidenced on the evening of June 10th when a meeting was held of those men interested in the formation of a society of general practitioners. At this meeting, a constitution was offered which had been drawn by Dr. Stanley R. Truman, Chairman of a Committee appointed by the San Francisco group. This constitution was accepted by the men there present, and the American Academy of General Practice came into being.

Article II of the constitution of this academy states the objects and purposes of the academy as "1. To promote and maintain high standards of the general practice of medicine and surgery. 2. Encourage and assist in providing postgraduate study for general practitioners in medicine and surgery, and to encourage and assist practicing physicians and surgeons to participate in such training; 3. To encourage and assist young men and women to prepare, qualify and establish themselves in general practice. 4. To protect the right of the general practitioner to engage in medical and surgical procedures for which he is qualified by training and experience; 5. To advance medical science and private and public health."

Membership in the Academy is open to any physician of high moral and professional character who is a graduate of a medical school approved by the American Medical Association. He must be duly licensed to practice in the State in which he practices and must be a member of the local medical association of the area in which he practices. It is further required that he will have had at least one year of rotating internship at an acceptable hospital or the equivalent in postgraduate training. Further, he must have been engaged in general practice for at least three years immediately preceding his application for membership and must have shown interest in continuing his medical advancement by engaging in some postgraduate activities during the said three year period. It is provided that membership will lapse at the end of three years and that in order to be eligible for re-election to membership, the practitioner must present evidence of his high moral and professional character and must have spent a minimum 150 hours during this three year period in postgraduate training of a nature acceptable to the membership committee.

At the organizational meeting in Atlantic City, applications were accepted from those men present who qualified, and a House of Delegates selected from the members there present, in so far as that was possible. Officers were elected and likewise a Board of Directors. Dr. Paul A. Davis of Akron, Ohio was elected President of the American Academy of General Practice and Dr. Stanley R. Truman, 1904 Franklin Street, Oakland 12, California was elected secretary. By virtue of their attendance at the organizational meeting, the Virginia members of the House of Delegates for the organizational year are Dr. C. P. Jones, Jr., Newport News, and Dr. John O. Boyd, Jr., of Roanoke.

The constitution and by-laws of the Academy anticipate the establishment of State Divisions of this Academy. It was determined from questioning those members present that there are now existing nine such State Academies which will become divisions of the American Academy, and it is hoped a similar division may be organized in the State of Virginia. At the state society meeting in Roanoke in October, registrations in general practice will be accepted, and a meeting of those so registering will be scheduled for the organization of a Virginia Division if interest warrants. At that meeting, constitution, etc., will be read in detail and any questions answered.

Any men interested in joining the American Academy of General Practice may obtain application blanks from either Dr. Jones or Dr. Boyd. Applications must be presented on a form which has been accepted by the American Academy and accompanied by a check in the amount of $25.00, $10.00 being initiation fee and $15.00 dues. It

should be clearly understood that this Academy is in no way connected with the American Medical Association or the Medical Society of Virginia. It is an organization of status similar to the American College of Physicians and the American College of Surgeons—it is not an American Board.

Resolution With Regard to Anesthesiology.

The Board of Directors of the American Society of Anesthesiologists, at a meeting held in Atlantic City, N. J., June 11, adopted the following resolution, to be publicized as widely as possible:

WHEREAS, the development and furtherance of modern Anesthesiology is of great importance to the welfare of patients and

WHEREAS, Anesthesiology is a component part of the practice of medicine:

NOW THEREFORE BE IT RESOLVED: That the American Society of Anesthesiologists, Inc., recommends strongly

A. The establishment of departments of Anesthesiology in all medical schools and hospitals under the direction of a doctor of medicine actively engaged in the practice of Anesthesiology.

B. That the department of Anesthesiology shall bear the same relationship to the medical school and/or hospital as is borne by other medical departments of the institution.

AND BE IT FURTHER RESOLVED: That The American Society of Anesthesiologists, Inc., disapproves

A. Of the training of persons other than doctors of medicine in the science and art of anesthesia, for the assumption of responsibility in the care of patients where it may be necessary to exercise medical judgment, and particularly does it disapprove of the issuance of certificates for such training by its members.

B. The existence of departments of Anesthesiology in hospitals and/or medical schools under the direction of persons other than doctors of medicine or under the nominal direction of doctors of medicine not actively engaged in the practice of Anesthesiology.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President—MRS. J. E. HAMNER, Petersburg
President-Elect—MRS. J. L. DECORMIS, Accomac
Recording Secretary—MRS. M. H. HARRIS, West Point
Corresponding Secretary,
MRS. MEADE EDMUNDS, Petersburg
Treasurer—MRS. REUBEN SIMMS, Richmond
Editorial Chairman—MRS. E. HOLLAND TROWER, Eastville

Annual Meeting.

The annual meeting of the Woman's Auxiliary to the Medical Society of Virginia will be held on Tuesday, October 14th, at Hotel Roanoke, Roanoke.

Mrs. T. Allen Kirk of that city has consented to be Chairman of Local Arrangements. She and her committees and the wives of the physicians in Roanoke wish to make the convention a happy and successful one.

It is hoped that there will be a full attendance of members of the Board of Directors, County Presidents, Presidents-elect, officers, chairmen, delegates and visitors.

Northampton-Accomac Auxiliary.

The Woman's Auxiliary to the Northampton-Accomac Medical Societies held its annual summer picnic and outing on July 8th, as guests of its president, Mrs. B. N. Mears, at her attractive new cottage, "Driftwood", at Silver Beach.

A delicious luncheon was followed by a social hour which was greatly enjoyed by members and guests.

CATHERINE R. TROWER, (MRS. HOLLAND)
Chairman, Press and Publicity.

Richmond Academy of Medicine Auxiliary.

Dr. L. Benjamin Sheppard was the guest speaker at the April meeting of the Auxiliary to the Richmond Academy of Medicine. He showed a movie on "The Y. M. C. A. Youth Fund Drive". Mrs. Ed Bryce, luncheon hostess, was assisted by Mrs. W. F. Cavedo and Mrs. E. M. La Prade.

MYRTLE G. MORTON (MRS. W. R.),
Publicity Chairman.

PUBLIC HEALTH

L. J. ROPER, M.D.,
State Health Commissioner of Virginia.

The report of the Bureau of Communicable Diseases of the State Department of Health for June, 1947, as compared with the same month in 1946, and for the period of January through June 1947, compared with the same period in 1946, is as follows:

	June 1947	June 1946	Jan.-June 1947	Jan.-June 1946
Typhoid and Paratyphoid	11	11	42	38
Diarrhea and Dysentery	865	448	2,676	1,171
Measles	933	2,397	7,007	12,228
Scarlet Fever	60	206	820	1,952
Diphtheria	12	26	137	225
Poliomyelitis	4	0	18	9
Meningitis	9	16	64	150
Undulant Fever	4	9	30	28
Rocky Mountain Spotted Fever	13	21	20	29
Tularemia	3	5	31	34

THERAPY IN ROCKY MOUNTAIN SPOTTED FEVER

The public health department is concerned with disease prevention primarily, but the concern and interest must be extended whenever possible to facilitate early recovery and to prevent complications and fatality. From the point of view of prevalence, Rocky Mountain Spotted Fever is of lesser public health significance than many other communicable diseases. The total reported cases in Virginia during 1945 and 1946 exceeded that of all other states, and yet the attack rate was less than 1 in 30,000 population. However, the case fatality rate has been greater than 20 per cent, the clinical picture generally severe, complications frequently develop and convalescence is prolonged. It is therefore considered important and of timely interest to review the more recent advances in specific and general treatment.

Recent investigation has shown that the acute case of spotted fever may develop serious deficiencies in fluid, chloride or protein levels. In addition, toxic capillary damage resulting in hemorrhage, and this with depression of blood forming organs, may result in problems of secondary anemia. Most cases of this disease require hospitalization in order that the utmost in medical and nursing facilities be available in meeting these clinical problems, and in the use of specific therapy the hospital laboratory may provide important and essential services. It may be possible to maintain adequate fluid, chloride and protein levels orally or by gastric gavage; otherwise, fluid and chloride requirements must be met through subcutaneous and intravenous use of normal saline and Ringer's solution. In the event of shock, or as indicated, glucose may be added. Repeated injections of plasma may be necessary to meet need in protein deficiencies and to combat shock. Transfusion with whole blood may also be required. Emphasis upon vitamin therapy is recommended, including A, B-Complex, C, D, and K.

A hyper immune rabbit serum has been developed for the specific treatment of spotted fever. This biological appears to have met with considerable success when used by the third day of eruption. Its use is somewhat limited to those with negative allergic history to rabbit and who do not react to sensitization tests. The serum is injected intramuscularly and treatment may be repeated if indicated, and if no important allergic reaction occurs. This preparation is expensive, must be used early in the disease and may sensitize the patient.

Numerous satisfactory clinical reports may be found in recent literature following therapy with para-aminobenzoic acid. This compound appears naturally in foods such as grains, liver and yeast, and is part of the Vitamin B-Complex. Large doses are usually well tolerated, with reaction or complication seldom appearing. Leukopenia, acidosis, abdominal swelling and delirium may follow treatment and must be watched for. Para-aminobenzoic acid is also known as P.A.B.A. and is available in the acid and alkaline tablet (sodium). If the former is used, for each gram of P.A.B.A., 10 cc. of a 5 per cent sodium bicarbonate solution is recommended to avoid acidosis. Dosage will vary from 0.5 to 1.0 grams of medication per pound of body weight per day. Because of rapid kidney excretion, P.A.B.A. is advised at two hour intervals. Blood concentrations of from 30 to 60 milligrams per cent are advised, and this should be estimated each day. White cell counts on a daily basis are also necessary and if depression occurs to 3,000 cells, medication should be modified or stopped.

In addition to specific therapy, supportive and symptomatic therapy are important. Careful supervision of each case is recommended to avoid complications and fatality.

BOOK ANNOUNCEMENTS

A Survey of Facilities for the Care and Treatment of Alcoholism in New York City. By The Committee on Public Health Relations of The New York Academy of Medicine. Reprinted from *Quarterly Journal of Studies on Alcohol*, New Haven, Conn., Vol. 7, No. 3, pp. 405-438, December 1946. individual copies 20 cents; fifty or more 15 cents each.

The Research Council on Problems of Alcohol suggested in 1944 that the Committee on Public Health Relations of the New York Academy of Medicine undertake a survey of the available facilities for the treatment of alcoholics in Greater New York. This thirty-five page pamphlet is the result of that survey. It makes interesting reading. New York is one of the few cities in the United States in which the treatment of alcoholism is regarded as a hospital problem and not primarily a police problem. The police rarely make an arrest for drunkenness. Nevertheless, alcoholism is indifferently treated unless there are complications. Sixty percent of New York physicians do not treat alcoholics and in the hospitals the common drunk is regarded as a nuisance. Only one voluntary hospital—the Knickerbocker—takes kindly to the treatment of these patients. This hospital has eighteen beds available to patients sponsored by Alcoholics Anonymous.

The Committee stresses the need for research in this field and recommends that there be a plan in a university-affiliated hospital to provide a teaching service for medical students and to render a public service to alcoholics and their families.

This report also gives a list of social agencies concerned with the problems and some account of their activities.

M. P. R.

Fundamentals of Clinical Neurology. By H. HOUSTON MERRITT, M. D., Professor of Clinical Neurology, College of Physicians and Surgeons, Columbia University; Chief of Division of Neuropsychiatry, The Montefiore Hospital. FRED A. METTLER, M. D., Ph. D., Associate Professor of Anatomy, College of Physicians and Surgeons, Columbia University. And TRACY JACKSON PUTNAM, M. D., Professor of Neurology and Neurological Surgery, College of Physicians and Surgeons, Columbia University. Philadelphia, The Blakiston Company, 1947. x-289 pages. Illustrated. Cloth. Price $6.00.

This volume has been prepared by its authors as a guide to the general practitioner to assist him in diagnostic problems which he may encounter with reference to the nervous system in his daily practice. The book is divided into two parts. The first deals with the basic techniques of the neurological examination. Although the description of these techniques is brief, the reader is provided with clear and adequate directions for the correct performance of neurological tests and the differentiation of normal from abnormal responses. Since the volume is intended for general practitioners, all special or controversial matter has been rejected and only accepted procedures are given. The techniques outlined correspond in general with those in use at the Montefiore Hospital and the Neurological Institute of New York. Illustrative forms for recording neurological examinations are included in the text.

The second part of the book describes the basic anatomical arrangements within the nervous system and something of the principles underlying their function with the view of permitting significant interpretations and evaluations of the findings of the neurological examination. Through this sound approach, the authors proceed to discuss most of the commonly encountered disorders of the nervous system. Brief reference is made to treatment but there is no discussion of special diagnostic techniques requiring surgical intervention. However, one chapter is devoted to the evaluation of cerebrospinal fluid findings in various diseases.

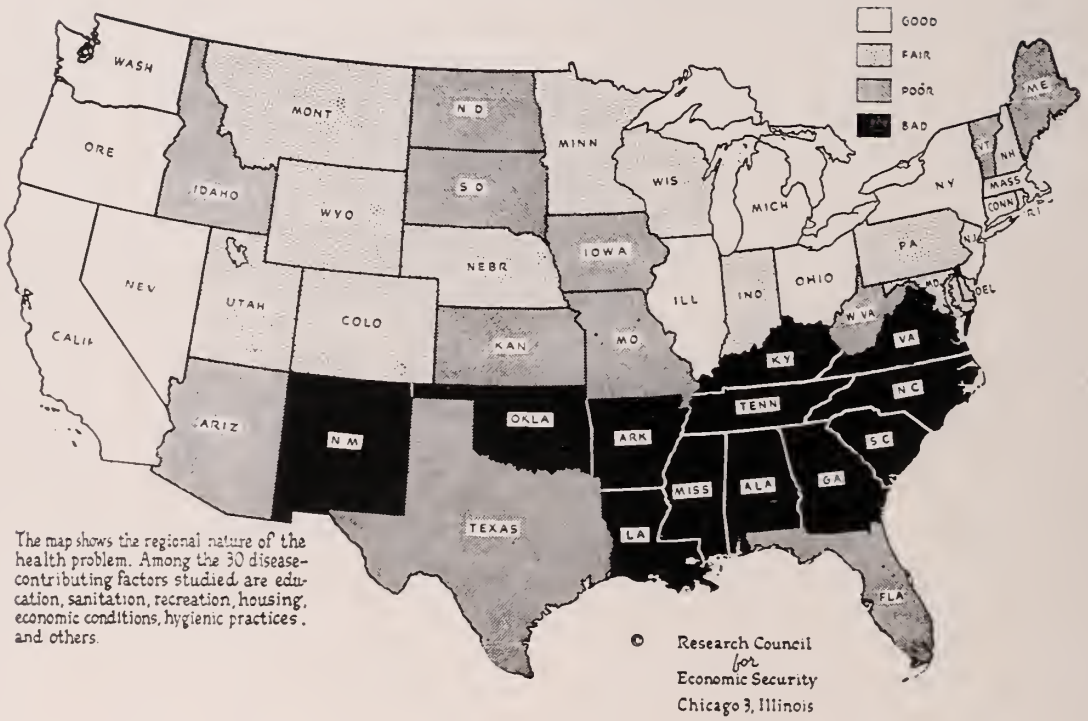
While the authors do not offer this book as a text designed to qualify the specialist in neurology, it is believed that the work will not only find a useful place on the desk of the general practitioner of medicine but will also be valuable to younger neurologists as a concise, lucid and authoritative source of information on the fundamental principles of neurology.

The text is written in clear, easily readable style and is beautifully illustrated with clinical photographs, microphotographs and roentgenograms portraying the characteristic features of various nervous diseases. There is also a profusion of well-executed drawings depicting the gross and finer structure of the nervous system and its connections, and a number of useful tables and graphs summarizing anatomical and clinical data.

E. C. HOFF.

EDITORIALS

Our National Health Problem



The map shows the regional nature of the health problem. Among the 30 disease-contributing factors studied are education, sanitation, recreation, housing, economic conditions, hygienic practices, and others.

Draft Rejections

DRAFT rejections is a poor index of health conditions because so many variables entered into the picture. In the first place, the standards set by the Military varied from time to time. In the second place, many things, hernia for instance, that rendered one unfit for military duty are compatible with health in civilian life. The cause of the greatest number of rejections was illiteracy and the second largest number of rejections were for muscular and bony defects, neither of which are health problems. Nevertheless, it is interesting to see how Virginia ranked among the states in this regard. Forty-one per cent of registrants examined February 1943 through August 1943 were rejected. The figure for the entire nation was 30.8 per cent. Seven states, Alabama, Arkansas, Florida, Georgia, Louisiana, North Carolina and South Carolina had higher percentages of rejections than did Virginia. It is significant that these states also had high percentages of illiteracy. The coefficient of correlation between percentage of rejectees and percentage of illiteracy in the various states is $+0.759$. The probable error is $\pm.042$. The coefficient of correlation is 15½ times the probable error and is therefore highly significant statistically. It is worth noting also that not one of seven states with a higher percentage of draft rejections had a non-white population of less than 24 per cent.

The Centennial Meeting of the American Medical Association

THE ninety-sixth annual session which marks a hundred years of the American Medical Association was indeed an inspiration. We were reminded of the unbelievable advances in medicine in general and particularly in American medicine that have occurred in the past one hundred years and were inspired by the thought of what the next one hundred years had in store for us. For instance, Sir Howard Florey told us of the innumerable moulds, mushrooms, actinomycoses and spore bearing bacteria, all possible sources of penicillin and streptomycin-like substances. There are some 2,000 species of moulds alone. He showed long lists of substances that had already been isolated and for one reason or another had been found useless from a therapeutic standpoint. He predicted an antidote for every pathogenic bacterium and virus. We were told of the advances in diagnosis and therapy with radioactive products, which, of course, are only in their infancy. That we were at the end of the era of infectious diseases and the beginning of the era of the degenerative diseases seemed to be commonly understood. The discovery of the cause and the cure of cancer was said to be just around the corner and that in the future increasing knowledge of genetics and foods would make old age both comfortable and profitable.

Sunday morning, on our way to Atlantic City, we heard the program that was broadcast from the Convention Hall. It consisted of three sermons, one by a Catholic priest, one by a Jewish rabbi, and one by a Presbyterian minister. In substance we were told that physicians who cooperate internationally in the use of scientific advances to prolong life and prevent suffering should teach the world the ways of peace and happiness. We arrived at Atlantic City in time for the conference of Presidents and Other Officers of State Medical Associations. The conference was in reality a symposium on the extension of medical care. The speakers were three prominent citizens of Cincinnati. Dr. Howard Schriver, president-elect of the Conference of Presidents, spoke on the Medical Profession's Programs to Improve Medical Care; Major General Hawley spoke on the Medical Profession's Cooperation with the Veterans Administration; and Senator Taft spoke on Health Legislation in Congress.

Atlantic City was in gala attire—strings of colored lights across the boardwalk and groups of flags on each lamp post and the shops had welcome signs in their windows. The post-office department issued a special commemorative stamp—a copy of Sir Luke Feldes' painting "The Doctor", representing Queen Victoria's personal physician on an all-night vigil with a gardener's child who was ill with pneumonia. Incidentally, the child recovered. The stamps were put on sale for the first time in the Convention Hall and for two days there was a long line at the stamp window. Cancelled stamps bearing the date June 9, 1947, sold on the boardwalk for twenty cents.

The Ballroom of the Convention Hall, where the general meetings were held, the Westminster Hall of the Chelsea Hotel, where the section on Obstetrics and Gynecology met, were always crowded. At the general meeting on Tuesday evening, some sixty or more delegates from foreign countries were presented and were awarded honorary fellowships in the Association. Henry Christian, an outstanding Virginian and a graduate of Randolph-Macon College, was awarded the Distinguished Service Medal. A medal was given to the retiring president, H. H. Shoulders, and to Olin West, the president-elect who resigned on account of ill health. The incoming president, Dr. Edward L. Bortz, made an eloquent address, outlining in a masterly manner the problems that confront the medical profession and painting the future in glowing terms.

The various sections had good programs, but the exhibits, both scientific and commercial, stole the show. They were both better and more numerous than usual and

were artistically dressed up to suit the gala occasion. Abbott, for instance, had a miniature stage with manakins representing Valentine Mott interviewing a modern surgeon, operating room nurse and nurse supervisor in a modern operating room. They were discussing anesthesia and Dr. Mott emphatically expressed his surprise with his cane. The meat products institutes had figures of an Australian, American, Chinese, and Hindu, in appropriate costumes and relative size and below each statuette were figures showing percentages of protein in the diet, height, weight, and duration of life. The average Australian ate 113.8 gms. of protein, was 5 feet 8 inches tall, weighed 170 pounds and lived 65 years. The average American ate 98.6 gms. of protein, was 5 feet 7½ inches tall, weighed 154 pounds, and lived 64 years. The Chinaman ate only 69.4 gms. of protein of which only 8.5 per cent was of animal origin. He was 5 feet 3 inches tall, weighed 120 pounds, and lived only 30 years. The Hindu ate 61.7 gms. of protein, was 5 feet 4 inches tall, weighed 110 pounds and lived only 27 years.

The scientific exhibits wore one's feet out. They were so fascinating that we kept going in spite of fallen arches and an aching back. They ranged all the way from priceless old books to cleared embryos mounted in transparent plastic. The time to study these exhibits is entirely too short. Some way should be devised for showing at least some of them in various parts of the country, either in regional meetings or at State Society meetings.

The Duty on Gavels

ON the occasion of the centennial celebration of the American Medical Association, the delegates from the British Medical Association presented to the House of Delegates a gavel and a block made from the wood of a mulberry tree that had grown in Tavistock Square, now site of the home of the British Medical Association, but formerly occupied by the home of Charles Dickens. It was under this tree that he wrote many of his great novels. Before the British doctors could bring this token of good will between two great medical associations, they had to pay Uncle Sam four dollars duty. This is the first time that we have heard of a monetary value being put on a gavel. Hitherto our conception of the duty of a gavel was to punctuate the proceedings of meetings. Sometimes these are of great historical importance and sometimes they are mere routine affairs. Gavels vary greatly in size. From the noise they make over the air, those used in political conventions must be of tremendous size. Those used in medical meetings are more modest in size.

Some gavels have great sentimental value to begin with and some acquire a sentimental value through the years. A little gavel that we have the honor of wielding once a month was made from an olive three that grew on the Mount of Olives. It was presented to Centenary Methodist Church by the Reverend J. N. Latham. Another gavel whose custody we had for a few days last June was made from the door knob of the office of Ephraim McDowell. It was presented to the American Gynecological Society by Thomas A. Ashby, a Virginian who made his medical reputation in Baltimore. The American Association of Obstetricians, Gynecologists and Abdominal Surgeons has two gavels: one is made from walnut and oak from trees in Danville, Kentucky, that once shaded Ephraim McDowell. The other is newer and is made of mahogany. It was given to the Association, if we remember correctly, some years ago when the older gavel was missing.

The gavel of the Richmond Academy of Medicine was a gift of Dr. R. W. Miller. A detachable silver band bears the name of the president of the Academy. Until

World War II, the band was removed at the end of each year and given to the retiring president. This custom had to be discontinued during the War because of lack of engravers and material.

The Medical Society of Virginia has a gavel made from the door sill of the birthplace of the late Walter Reed. Any one of these gavels could tell a story as interesting as that of the Gold Headed Cane, if there were any Macmichaels around to write down their stories. If the Federal Government gets in the habit of putting a tax on sentimental value, these historic implements may become real financial burdens.

NEWS

Organization of the Virginia Section of the American Academy of General Practice.

In anticipation of the organization of the Virginia Section of the recently organized American Academy of General Practice, arrangements have been made for an organizational meeting during the meeting of the Medical Society of Virginia in Roanoke in October. After going over the program and consulting with the Committee on Arrangements, the best time was felt to be a breakfast meeting at 8:00 o'clock, the morning of October 14th. This breakfast will be held at Hotel Roanoke and it will be necessary that those who desire to attend notify Dr. John O. Boyd, Jr., 820 S. Jefferson St., Roanoke, Virginia, of their intent no later than October 10th.

This meeting will be open to all general practitioners who are members of their local societies and in good standing, whether or not they have joined the American Academy of General Practice prior to the date of the meeting.

Personnel Changes, State Department of Health.

Effective July 1, the Virginia Peninsula Health District was divided into two units—the Elizabeth City-Warwick County Health District with Dr. Thos. F. McGough in charge, with offices at Hilton Village; and the Charles City-James City-New Kent-York District with Dr. Linwood Farley as Health Officer. His headquarters are in Williamsburg. Dr. Farley, who had been health officer of the Augusta County Health District, was succeeded there by Dr. George B. Tyler, recently released from the Navy, who will be located at Staunton.

Fauquier County Medical Society.

At the meeting of this Society in Warrenton on July 17th, the following were elected officers for the coming year: President, Dr. V. L. McCullers, Remington; vice-presidents, Dr. H. L. Townsend, Marshall, and Dr. Walter G. Trow, Warrenton; secretary-treasurer, Dr. J. Frank Folk, Warrenton. At this time, delegate and alternate to the State meeting in Roanoke were also elected.

Buchanan-Dickenson County Medical Society.

At the meeting of this Society held in Grundy on the third Wednesday night in June, Dr. J. S. Shaffer of Grundy Hospital presented a very interesting paper and discussion on Toxicity of Penicillin. He and Dr. C. F. Johnston, also of Grundy Hospital and recently appointed coroner for Buchanan County, were elected to membership. Delegates and alternates to the Roanoke meeting of the State Society were also named at this meeting. Officers of the Society are: Dr. C. F. Reagan, Grundy; president, Dr. J. P. Sutherland, Harman, vice-president; and Dr. T. C. Sutherland, Haysi, secretary-treasurer.

Associated With Dr. Blanton.

Dr. Wyndham B. Blanton, Richmond, announces the association of Dr. Adney K. Sutphin in the practice of Internal Medicine and Allergy, at 828 West Franklin Street, Richmond. Dr. Sutphin graduated from the Medical College of Virginia in 1941 and has served internships and residencies at University Hospital, Charlottesville, Massachusetts General Hospital, Boston, and the Hospital Division of the Medical College of Virginia. He served thirty-four months in the Army, having the rank of captain at time of his discharge.

Dr. John A. Vann,

Of the class of '42, University of Virginia, after several years spent at the Willis Campbell Clinic, Memphis, Tenn., has located in Norfolk, with of-

fices at 306 Medical Arts Building. He is specializing in orthopedic surgery.

Reappointed on Medical College of Virginia Board.

Nine members of the Board of Visitors of the Medical College of Virginia were reappointed by Governor Tuck in July for four year terms. They are: Lewis G. Larus, Eppa Hunton, IV, and W. H. Schwarzschild of Richmond; Dr. W. W. Wilkinson, LaCrosse; Dr. J. B. Fisher, Midlothian; Dr. Claude B. Bowyer, Stonega; Dr. J. D. Collins, Portsmouth; David H. Harrison, Jr., Hopewell; and G. Tyler Miller, Rappahannock. The Superintendent of Public Instruction is an ex-officio member.

Dr. William Grossmann,

Who has just completed fifteen months as assistant resident on Pediatrics at the University of Virginia Hospital, opened his office at 105-B Marshall Street, Petersburg, July 15, for the practice of Pediatrics. Dr. Grossmann was director of the Bureau of Communicable Diseases of the State Department of Health from 1939 to 1942 when he entered the Service. He was discharged from active duty with the rank of lieutenant colonel in February 1942.

Dr. Frank H. Redwood,

Norfolk, has been reappointed by the Governor as a member of the State Hospital Board for a term of four years, subject to confirmation by the General Assembly.

Dr. Albert R. Gillespie,

Class of '37, University of Virginia, recently of Harrisonburg, has located in Staunton, with offices at Lewis and Frederick Streets, for the practice of ophthalmology and otolaryngology.

Dr. George E. Barksdale,

Richmond, a member of the Medical Society of Virginia and of the American Medical Association, was recently awarded a prize of $250.00, by the American Medical Association Art Society for his painting, the *Death of Jesse Lazear.*

This painting depicts the dying hero who had voluntarily permitted an infected mosquito to bite him, knowing full well the possible consequences, and is shown lying in bed at the close of day on September 25, 1900, where, in the presence of James Carroll and Major Walter Reed, he is coming to the close of a life of sacrifice.

The award was given in this instance as one of several paintings that were exhibited at the meeting of the American Medical Association at Atlantic City in June, and was in competition for the best paintings done by members of the Association on the subject: "Services beyond the call of duty" in military and civilian life.

The painter is a member of several art societies, and has frequently exhibited here and elsewhere, and during the War I was regimental surgeon of Sixth Field Artillery of the First Division of Regulars.

Virginians Attend Dublin Congress.

Dr. Chester D. Bradley of Newport News and Dr. M. Pierce Rucker of Richmond attended the International Congress of Obstetricians and Gynecologists, July 7 to 11, which celebrated the bi-centenary of Rotunda Hospital. This was held at the Royal College of Surgeons in Ireland, in St. Stephen's Green, Dublin. Mrs. Bradley and Mrs. Rucker accompanied their husbands and both couples made the trip by plane.

The Seaboard Medical Association of Virginia and North Carolina

Has selected dates for its annual meeting as December 3, 4 and 5 at The Cavalier, Virginia Beach. Dr. O. R. Yates, Suffolk, is president, and Dr. Clarence Porter Jones, Sr., Newport News, secretary.

Married.

Dr. Charles Henry Patterson of Lynchburg, and Mrs. Marguerita Goodricke-Cattell Young of Auckland, New Zealand, June 18.

Dr. Harold Wayne Ward, class of '35, Medical College of Virginia, and Miss Frances Eileen Gibson, Charleston, W. Va., but now a student in medicine at the Medical College of Virginia, June 28. Dr. Ward is at present a member of the medical staff at the Veterans Hospital, Huntington, W. Va.

Dr. Stuart Hinman Light, Huntington, W. Va., and Miss Jane Constance Maydian of Richmond, June 19. Dr. Light is a member of the class of '47,

Medical College of Virginia, and is interning at Southern Baptist Hospital, New Orleans.

Dr. Marion Lee Rice, Jr., and Miss Virginia Lee Figg, both of Richmond, June 30. Dr. Rice is a member of the class of '44, Medical College of Virginia, and they will make their home in Memphis, Tenn.

Appointments to State Hospitals.

Dr. James B. Pettis, superintendent of Western State Hospital at Staunton, will also act as superintendent of DeJarnette Sanatorium, pending the designation of a successor to Dr. H. P. Newbill, deceased.

Dr. Joseph E. Barrett, State Commissioner of Mental Hygiene and Hospitals, has also appointed Dr. Isaac C. East, formerly with the New Jersey State hospital system, as clinical director of Eastern State Hospital at Williamsburg, and Dr. Hugh Kenneth Moir of Toronto, Canada, as senior physician at Southwestern State Hospital at Marion.

Dr. W. R. Weisiger,

Richmond, was recently elected associate supreme royal patron of the Supreme Council, Order of Amaranth, Inc. He is the first Virginian to have been so honored by the order. He is a thirty-third degree Mason and a member of Virginia Court No. 1 of Richmond.

Motion Picture Films Available.

Believing that professional motion picture films can be of great value in bringing to practitioners and to medical students the advances in medical knowledge, the Academy-International of Medicine has had compiled a list of the films now available, indexed by topics, and including the source from which they may be obtained by the borrower.

As a service to the profession the Academy is offering to mail, upon request, to any members of the Medical Society of Virginia a complimentary copy of the AIM Medical and Surgical Film Catalogue. Requests should be addressed to: Academy-International of Medicine, 214 West Sixth Street, Topeka, Kansas.

Dr. E. G. Gill,

Roanoke, upon invitation extended by the faculty of Duke University, recently served as an associate examiner in ophthalmology for the National Board of Medical Examiners, meeting at Duke University.

Dr. Wilbur M. Bowman

Is back in Petersburg after service in the Army Medical Corps, and has been appointed health officer of that city, succeeding Dr. Mason Romaine, who recently resigned to become director of the division of cancer control of the State Health Department.

Dr. Walter L. Nalls

Has been appointed clinical director of the Veterans Administration Hospital at Oteen, N. C. Dr. Nalls was associated with Dr. Dean Cole of Richmond, prior to entering the Service, but, upon his return, located in Alexandria where he has been practicing for the past year.

The American Congress of Physical Medicine

Will hold its twenty-fifth annual scientific and clinical session September 2-6 inclusive, at the Hotel Radisson, Minneapolis. All sessions will be open to members of the medical profession in good standing with the American Medical Association. In addition to the scientific sessions, the annual instruction courses will be held September 2-5. These courses will be open to physicians and the therapists registered with the American Registry of Physical Therapy Technicians. For information concerning the convention and the instruction course, address the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

Drs. Rawles and Cherry.

Dr. Benjamin W. Rawles, Jr., announces the association of Dr. Kenneth J. Cherry in the practice of general and gynecological surgery. Their offices are at 807 West Franklin Street, Richmond.

Dr. T. S. Jennings,

Formerly of Waverly, who has been connected with the McGuire Veterans Administration Hospital, Richmond, since August 1946, is now at Newton D. Baker Hospital, Martinsburg, W. Va., as chief of Tuberculosis.

Dr. William A. Sadler,

Class of '44, Medical College of Virginia, recently connected with Buxton Hospital, Newport News, has located for general practice, at Mathews.

Dr. Edmund Horgan,

Formerly of Washington, D. C., where he was engaged in the practice of surgery, was recently

separated from the Service after having been on duty for more than four years, and has resumed practice as a consulting and operating surgeon, with offices in Winchester.

Schering Appoints Virginian Pharmacist to Field Staff.

Schering Corporation of Bloomfield and Union, New Jersey, manufacturers of endocrine and pharmaceutical preparations for the medical profession, announce the appointment of Mr. Edward B. Kilby, Jr., of Richmond, to the Schering Professional Service staff. Mr. Kilby graduated from Hampden-Sydney College, and also attended the Medical College of Virginia, School of Pharmacy, and has done graduate work at William and Mary College. After four years in the Pacific theatre with the U. S. Army he was employed in his present capacity. He will make his headquarters in Richmond and will be of service to the physicians and pharmacists in Virginia.

Dr. Louis Perlin,

Richmond, announces the removal of his office to 601 Roseneath Road, this city.

Research Fellowships.

The American College of Physicians announces that a limited number of Fellowships in Medicine will be available from July 1, 1948-June 30, 1949. These Fellowships are designed to provide an opportunity for research training either in the basic medical sciences or in the application of these sciences to clinical investigation. They are for the benefit of physicians who are in the early stages of their preparation for a teaching and investigative career in Internal Medicine. Assurance must be provided that the applicant will be acceptable in the laboratory or clinic of his choice and that he will be provided with the facilities necessary for the proper pursuit of his work. The stipend will be from $2,200 to $3,000.

Application forms will be supplied on request to The American College of Physicians, 4200 Pine Street, Philadelphia 4, Pa., and must be submitted in duplicate not later than November 1, 1947. Announcement of the awards will be made as promptly as is possible.

The Virginia Chapter, American College of Chest Physicians,

At its annual meeting held at Pine Camp Hospital, Richmond, the latter part of June, elected Dr. Dean B. Cole of Richmond as president. Dr. C. L. Harrell, Norfolk, was named vice-president, and Dr. Charles W. Scott, Burkeville, secretary-treasurer. About fifty Virginia physicians especially interested in diseases of the chest attended the all day session.

Dr. Baker Goes to West Virginia.

Dr. James P. Baker, Jr., resigned his position as director of the department of continuation education at the Medical College of Virginia, Richmond, effective July 1, to become medical director of the Greenbrier Clinic, White Sulphur Springs, West Virginia. Dr. Baker had been connected with the College faculty since 1934 except for his three years in Service.

Dr. Charles M. Caravati, who has been a member of the department of continuation education of the College, has taken over Dr. Baker's work on a part time basis.

News from Duke University School of Medicine.

Resigning his position as instructor in the Duke University School of Medicine, Dr. E. G. Goodman returned to Wilmington to undertake the practice of internal medicine, allergy and hematology beginning July 1. He has been a member of the Duke Hospital staff since 1940.

Three members of the Duke University School of Medicine faculty have been appointed as expert consultants to the Surgeon General of the War Department. Dr. J. Lamar Callaway, Professor of dermatology and syphilology, serves as consultant in dermatology; Dr. Elbert L. Persons, assistant professor of medicine and director of student health for men, is consultant in medicine; and Dr. Barnes Woodhall, Professor of neuro-surgery, acts in the capacity of consultant in neuro-surgery. The three physicians were employed through the medical consultants division of the office of the Surgeon General and are required to spend one day out of every two week period at Fort Bragg where they conduct clinics, give lectures and make ward rounds.

Drs. R. Burke Suitt, Leslie Hohman and Robert Graves have been appointed to the Mental Hygiene

Committee of the Medical Society of the State of North Carolina, with Dr. A. B. Choate of Charlotte as Chairman. Other members of the Committee are Drs. David Young, Raleigh; Lloyd Thompson, Winston-Salem; J. F. Owen, Raleigh; and H. R. Parker, Greensboro.

Dr. Hugh B. Brown, Jr.,

Lieutenant Colonel in the Medical Corps of the Army and recently stationed in Washington, is being relieved from service the latter part of August and, after a few months in post-graduate study, will return to active work at Draper.

Joins Staff of Southern Medical Association.

Mr. C. P. Loranz, secretary-manager of the Southern Medical Association, announces that Mr. H. L. Williams of Birmingham has joined headquarters staff of the Association. Mr. Williams is well qualified by education for his new position and has worked in Birmingham except for time he served in the Navy, having the rank of lieutenant (jg) at time of his release in 1946.

Dr. G. H. A. Clowes, Ph.D., Sc.D., LL.D.,

Director Emeritus of the Lilly Research Laboratories, was honored by the American Diabetes Association at its recent annual meeting in Atlantic City, New Jersey. He delivered the annual Banting Memorial address and was awarded the Banting Medal which is given in recognition of distinguished service in the field of diabetes.

Under Dr. Clowes' direction, the Lilly Research Laboratories cooperated with the University of Toronto and Drs. Banting and Best in the early development of insulin of sufficient purity and stability to permit its widespread clinical use throughout the world.

The International College of Surgeons,

U. S. Chapter, will hold its twelfth annual assembly and convocation in Chicago, September 28 to October 4, 1947.

The program will include operative and nonoperative clinics, demonstrations, symposia, forums, medical motion pictures, exhibits and the formal dedication of the new library and permanent home of the United States Chapter. All meetings, with the exception of the operative clinics, will be held in the Palmer House and the Stevens Hotel.

Copy of the program and detailed information may be obtained by writing Max Thorek, M.D., Co-chairman, 1516 Lake Shore Drive, Chicago, Illinois.

The American Hospital Association

Will hold its annual convention in St. Louis, September 22-25. "Major Factors Affecting the Hospital Economy" will be the subject for the opening general session on the first evening. Other sessions will be broken into four sections which will convene simultaneously: Professional Practice, Administrative Practice, Hospital Planning and Plant Operation, and Special Aspects of Hospital Administration. A buffet supper and informal gathering in honor of the new president on Monday evening, and a ball and banquet on the last evening have been planned for the social program.

Members of Roanoke Board of Health.

Dr. E. G. Gill has been re-elected chairman of the Board of Health of Roanoke for two years, and Dr. W. R. Whitman has been elected vice-chairman for the same period.

American Board of Obstetrics and Gynecology.

The next written examination (Part I) for all candidates will be held in various cities of the United States and Canada on Friday, February 6, 1948. Applications are now being received for this, the closing date being November 1, 1947. For further information and application blanks, address Paul Titus, M.D., Secretary, 1015 Highland Building, Pittsburgh 6, Pennsylvania.

The American College of Surgeons

Will hold its thirty-third annual Clinical Congress, including the twenty-sixth annual Hospital Standardization Conference, at The Waldorf-Astoria, New York, from September 8 to 12. The five-day program features operative and nonoperative clinics in 38 hospitals in New York and Brooklyn, and scientific sessions in general surgery and the surgical specialties, official meetings, hospital conferences, medical motion pictures, and educational and technical exhibits, at the headquarters hotel. Dr. Howard A. Patterson of New York is Chairman of the Committee on Arrangements; Dr. Frank Glenn is Secretary. Dr. Malcolm T. MacEachern and Dr. Bowman C. Crowell, Chicago, the Associate Directors, are in general charge. Dr. Irvin Abell, Louisville, President of the College will preside.

The Convocation, at which between five and six hundred initiates will be received into fellowship, will be held on Friday evening, September 12. The new president, Dr. Allen, will confer the fellowships and honorary fellowships. Dr. Andrew C. Ivy of Chicago will give the Fellowship Address.

Dr. Frank F. Thweatt, Jr.,

Senior Surgeon, with the U. S. Public Health Service, has been transferred to Norfolk to have charge of the U. S. Marine Hospital there. He is a native of Petersburg and a graduate in Medicine from the University of Virginia in 1928.

Dr. Rowland H. Walker,

Formerly of Martinsville, has moved to Norfolk and on August 1st opened an office at 310 West York Street, for the practice of Internal Medicine.

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Wanted—

A resident or associate in Group practice. Write Dr. A. M. Showalter, Christiansburg, Va. (*Adv.*)

Wanted—

Resident physician, Grade A school. Room, board, uniforms, laundry and $100.00 monthly. Address Miss N. J. Curtis, Superintendent, Sheltering Arms Hospital, 1008 East Clay Street, Richmond 19, Va. (*Adv.*)

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Address New Altamont Hospital, Christiansburg, Va. (*Adv.*)

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OBITUARIES

Dr. Hugh Page Newbill,

Superintendent of DeJarnette Sanatorium at Staunton since the first of the year, was found dead on July 2nd at a cabin in Albemarle County, where he had been vacationing. He had apparently been dead about two weeks and death was believed to be due to an overdose of some drug to produce sleep. Dr. Newbill was thirty-eight years of age and a graduate from the University of Virginia, Department of Medicine, in 1934. Before accepting his appointment in Staunton, he had been assistant professor of psychiatry at his alma mater and was associated with Dr. D. C. Wilson in the operation of the Davis Clinic of the University Hospital. Burial was at Norfolk, his former home. He was a member of the Medical Society of Virginia and of a number of societies pertaining to his specialty. He is survived by his widow and a son and also his parents and a sister.

Dr. Carroll Harris Fowlkes,

Well known ear, nose and throat specialist of Richmond, died July 6, at the home of a sister at Columbia, where he had gone for a short vacation. He was fifty-nine years of age and graduated from the Medical College of Virginia in 1910, following which he interned at Johnston-Willis Hospital, Richmond, and at the Brooklyn Ear and Eye Infirmary. After this, he returned to Richmond and had practiced here except for time spent in service during World War I. He was a member of the Medical Society of Virginia and a number of other professional and civic organizations. His wife died about two years ago but four children survive him.

Dr. James Millard Graybeal,

Eye, ear, nose and throat specialist in Marion for the last seven years, died at his home there on July the 6th. He was seventy years of age and a graduate of the University of Tennessee College of Medicine in 1901. He had practiced his profession for thirty-eight years in Montana, prior to locating at Marion. His wife and a son survive and Dr. A. B. Graybeal of Marion is a brother.



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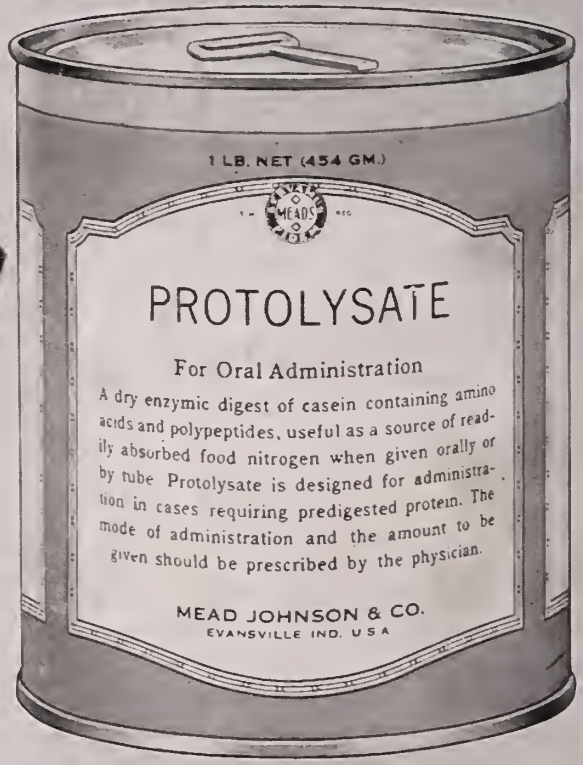
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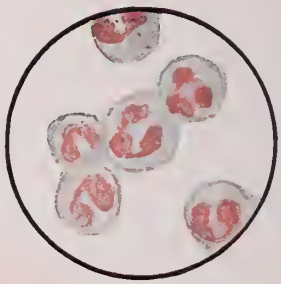
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Virginia Medical Monthly

Vol. 74, No. 9.
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GUEST EDITORIAL

The Community Memorial Hospital

"THE truth is apparent. There are too few hospital beds in Richmond at this time and the acuteness of the situation is likely to be increased by the growth of the population and by the extension of Group Hospitalization."[1] These prophetic words were printed on the editorial page of this magazine in January 1941. This is the first public statement I can find on the shortage of hospital beds in Richmond, although the growing need had been discussed by Richmond physicians several years prior to 1940. It appears to me that after a decade of experience in this field, a frank and full discussion is in order.

I am surprised at the few public statements during the early '40's. The situation, as we look back upon it, had grown rapidly worse. In early 1944 I noted a news comment. The occasion was caused by the visit to the city of a prominent syndicated newspaper columnist. He arrived at his hotel early in the morning desperately ill, with immediate hospitalization indicated. A nurse had to be rushed to his hotel room until his physician could discharge a patient in order to make a hospital bed available. The situation aroused the interest of the newspapers.

Late in 1944 the shortage was very acute and a Richmond physician commented on it in the VOICE OF THE PEOPLE and other letters followed. It was at this time that the proposition was made to enlarge the *Retreat for the Sick*.

Early in 1945, as an outgrowth of the acute situation, the Richmond Community Council sponsored a committee to study our hospital needs and make recommendations regarding them. This committee commissioned Dr. Robin C. Buerki of Philadelphia to survey the city's situation. He made a thorough study and in April submitted a 100 page report.[2] In it he praised the work of our private hospitals in the past. He emphasized the fact that the splendid new Medical College of Virginia Hospital was primarily a teaching hospital and should not be diverted from filling the great need as a teaching institution for which end it was founded. He showed us how woefully lacking we were and had been in the past of non-profit beds for private and semi-private cases. He concluded his report by stating that our minimum need could be supplied only by a 500-bed non-profit hospital. He advised that the community make plans immediately to supply this need.

The committee from the Richmond Community Council gave careful study to the report and late in 1945 invited Dr. Buerki to come to Richmond and review his report before a mass meeting of citizens. After his very able presentation, a committee of five was appointed to give the matter further consideration. As a result this steering committee gathered around them a group of some 35 or 40 citizens. This able group, composed of our leading business and professional men and women, organized themselves into a hospital board with an able president and a splendid group of officers. There were no physicians on this Board.

[1] *The Doctor's Dilemma,* Wyndham Blanton, M.D., *Virginia Medical Monthly* **68**: January, 1941.

[2] *Survey of Hospital Facilities in Richmond, Virginia,* Robin G. Buerki, M.D., April, 1945.

Aside from this effort, during the Spring and Summer of 1946 a group of Richmond physicians began to study the hospital needs of the city along with the Buerki report. This group met together in an unofficial capacity. Their advice was constantly sought by the hospital steering committee and later by the hospital Board. Shortly thereafter, the President of the Richmond Academy of Medicine appointed an Advisory Committee of physicians to act as official advisors for our citizens in their effort to solve this great and growing problem. This Advisory Committee grew from 25 to 50 members. Then this large committee of 50 was divided into about a dozen sub-committees to study the different phases of the hospital question. For example, one group studied the type of building best suited to Richmond's needs; another the location. Other groups worked on staff requirements, the nursing problem, etc.

This group of physicians soon learned that there was a great deal of meat in the Buerki report. The situations described by Dr. Buerki were found to be only too true. By taking a census of the hospitals themselves this Advisory Committee learned that every day in the city of Richmond there were from 300 to 350 on the waiting list desiring hospitalization. The private hospitals were struggling valiantly to meet the needs but they were inadequate to do so. We found to our surprise, during all this hospital bed shortage in Richmond, that the Sheltering Arms Hospital (a unique institution in Richmond in that all of its beds are free) was only about one-third full. The demand was most assuredly for private and semi-private beds. We likewise found the nursing problem a very vexing one. Again the editorial in this magazine offered a very helpful comment.[3]

Early in 1946 another movement started which had profound effect upon the hospital. During the early Fall of 1945, the late William Herbert, then Mayor of Richmond, appointed a committee of citizens whom he requested to make a recommendation for a suitable War Memorial after they had investigated what the people of Richmond really wanted. In January 1946 one of our city physicians proposed in the *Times-Dispatch* VOICE OF THE PEOPLE that a most fitting and appropriate War Memorial would be the proposed Community Hospital. This suggestion received favorable editorial comment from this newspaper. After considering a great many proposals, the Citizens' Committee submitted a questionnaire to the nearest of kin of deceased veterans as to what their preference would be, and 65 per cent of those questioned made reply. Of this group 80 per cent voted for the hospital as the most suitable type of War Memorial for Richmond. During the Spring and Summer of 1946 there were 25 civic and other organizations which went on record approving the proposed hospital. This number was later increased to 40.

On the strength of this mandate from the people, the Citizens' Committee recommended to Mayor Herbert that Richmond wanted a non-profit community hospital as the War Memorial. Shortly after the committee made its report Mayor Herbert died. His successor, Mayor Horace Edwards, accepted the report of the Citizens' Committee and advised that it be submitted to the Common Council for their sanction.

The Board of the hospital was on the point of sending this request to the Council in the Spring of 1947 when a group of young veterans asked to be allowed to poll all veterans of World War II to ascertain their specific wish as to a War Memorial. The hospital Board agreed to this request. The various veterans' groups sent out ballots to all veterans in Richmond and the immediate vicinity. Of the twenty odd thousand

[3] *The Training of the Graduate Nurse*, Drs. Warthen and Williams, *Virginia Medical Monthly* **73**: July, 1946.

ballots sent out 5,000 responded. Of this group the plurality was for the proposed community hospital as Richmond's War Memorial.

After this poll was concluded, the hospital Board made its formal request of the Common Council. The paper was first considered by the Ordinance Committee, then the Common Council, and finally by the Board of Aldermen. It passed all three bodies with only one dissenting vote. On July 22, 1947, Mayor Horace Edwards signed the ordinance making the proposed non-profit community hospital the official memorial to the dead of World War II. A few days later the hospital Board met and named the proposed hospital "The Community Memorial Hospital" and proceeded to secure its charter.

SUMMARY

It would be impossible to condense all that we have learned from this ten year experience in this article, but in order to review the most salient points, we close with this brief summary:

A grave shortage of hospital beds exists in Richmond and we have every reason to believe the shortage exists throughout the state.

Hospital facilities for treating and caring for the sick are in more constant demand. For a number of reasons people are more hospital conscious. Hospital insurance facilitates their hospitalization. The more complex society becomes, the greater the demand. We conclude, therefore, that this present shortage, which has extended practically a decade already, will continue to grow.

Our pressing need is for more private and semi-private beds furnished by a non-profit general hospital with an open staff. The Medical College of Virginia is a teaching hospital and must continue to be used for that specific purpose. The private hospitals which have served so well in the past will be and should be improved. However, neither of these two types, as valuable as they are, can fulfill Richmond's needs.

Another factor worthy of deep concern is the plight of our young physicians who desire to practice here. The private hospital does not have the facilities to accommodate all of its owners, much less to take in those from the outside, even though these men may be exceptionally well trained. The private closed staff may well become a "succession" system rather than a merit system. Our enviable position as a medical center may easily be endangered by such a course. The Medical College of Virginia needs the part time service of many well trained, unaffiliated men as teachers and the proposed hospital will furnish a place for them to practice.

From what we have learned, the underprivileged citizens do not wish to be segregated in a strictly charity hospital. Hospital insurance will solve a part of their problem and an endowment fund would likewise be extremely useful. It certainly appears that people, unable to pay all hospitalization costs, would prefer being helped according to their needs in a non-profit hospital.

From the civic activities since V-J day, there can be no doubt that the desire of this community is for a living memorial to the city's dead of World War II. They have so expressed themselves in selecting the Community Memorial Hospital as their preference. It is designated as "The Municipal World War II Memorial."

The financing, erecting and staffing of such a hospital will be a herculean task and presents many problems. However, one recalls an old Chinese proverb which says "There is no task under Heaven feared by the man who puts his heart in it."

HENRY WALKER DECKER, M.D.

EDITOR'S NOTE: Dr. Decker is chairman of the Hospital Advisory Committee from the Richmond Academy of Medicine and has worked hard and earnestly in the interest of this memorial.

THE NEED FOR TRAINED MEDICAL ANESTHETISTS IN VIRGINIA*

HARRY J. WARTHEN, JR., M.D.,
Richmond, Virginia.

I would like to preface my remarks today by stating that the general level of the practice of medicine and surgery in the State of Virginia has always been high and that this has been especially true of most of the specialties within these two large groups. This statement, however, cannot be made with reference to the specialty I wish to discuss today—that of anesthesia, or, as it has been termed more recently, anesthesiology. The question as to why Virginia and, for that matter, the entire South Atlantic Area, has failed to take full advantage of the best that modern anesthesia has to offer is difficult to answer and beyond the scope of this paper. The fact remains that probably ninety per cent of all anesthesias given in Virginia are administered by non-medical personnel.

Several weeks ago a questionnaire was sent to 85 hospitals in the State of Virginia asking if their staff included a physician anesthetist and if this staff member was certified by the American Board of Anesthesiology. Only civilian hospitals were chosen for this survey and neither Veterans Administration nor mental or tuberculosis hospitals were included.

Replies were received from 78 or 92 per cent of the hospitals queried. Assuming that the 7 hospitals which did not reply did not have a physician anesthetist and this assumption appears reasonable in view of the size of these institutions, this survey showed that only 13 physicians are practicing anesthesia in the State. One of this number is certified by the American Board of Anesthesiology. The latter statement is made with a full realization that many who have not taken the Board are superior anesthetists to some who have been certified but this is the only yardstick of proficiency we have at the present time, and it is the standard by which outsiders judge our anesthetists.

This situation is not true generally throughout the United States. In a recent communication from Dr. Paul M. Wood,[1] Secretary of the American Board of Anesthesiology, he stated that while there are only 280 Diplomates of this Board, there are at the present time 2,900 physicians studying or practicing full or part time anesthesiology in this country. This, he states, is a tremendous increase over 5 years ago when there were less than 500 physician anesthetists in the United States. Two thousand nine hundred anesthetists represent about one anesthetist for each 2 approved hospitals in this country.

If we apply the figures furnished by Dr. Wood, we find that Virginia with one-fiftieth of the hospitals and physicians in the United States has one-two hundred and eightieth of the Board members and one-two hundred and twentieth of the medical anesthetists in the country. These figures are, of course, rough approximations, but they indicate that we have less than one-fourth of our share of medical anesthetists.

Virginia is not alone in this respect, for the 1946 Geographical Director of the American Board of Anesthesiology shows only one Diplomate of the Board in the states of Maryland and North Carolina. None of the South Atlantic States shows up well in comparison with Massachusetts which has 18, or Connecticut with 10 members.

The question may be asked—granted the above is true—to what extent and in what degree is the well trained medical anesthetist superior to the well trained technician anesthetist?

In the first place, virtually all of the advances that have been made in anesthesia have been the result of original contributions by physicians. During the first seventy-five years after the introduction of anesthesia few physicians were interested in this specialty. It was considered only a means to an end and the rapid strides that were being made in the broadening field of surgery diverted attention from this important subject. The anesthesias were given by a physician who chanced to be available or by a nurse who frequently was assigned this duty along with other functions in the operating room. In some instances an orderly served as anesthetist. Needless to say, the standard was low and in all probability the safest anesthesias were given by nurses. This state of affairs continued until about 1920. It is significant that ether, nitrous oxide and chloroform

*Read before the annual meeting of the Medical Society of Virginia, at Virginia Beach, October 14-16, 1946.

continued to be used in much the same manner as when they were introduced three-quarters of a century before. Little had been added to our knowledge concerning these drugs and, with the exception of the various local anesthetics, no new agent had been discovered.

About twenty-five years ago a change occurred. Physicians became interested in anesthesia and began to specialize in it. The rapid increase in our knowledge of this subject dates from this time. Regional anesthesia, ethylene, avertin, cyclopropane, spinal, continuous spinal, caudal, intra-tracheal and most recently intravenous barbiturates and curare have all been introduced or advanced during this short period of time under the stimulus and guidance of physicians specializing in anesthesia. Far more has been learned during the past quarter century regarding the physiology of anesthesia than was known prior to this time. The ideal anesthetic has not been discovered and much remains to be learned, but we can be certain that the advances in this field will be made by physicians and not by technicians.

The more extensive surgical procedures that are now carried out require careful evaluation of the patient prior to operation as well as skilful handling of the anesthetized patient. This preoperative evaluation should be made by a physician. The great progress made in neurosurgery, abdominal and most recently in thoracic surgery has demanded a quality of anesthesia that was not required a few years ago. The circulatory and respiratory changes that occur in major procedures on the lung require an anesthetist who can anticipate and meet emergencies which frequently arise during the course of these operations. He always must be able to intubate a patient or aspirate the bronchial tree.

A surgeon who has not had the opportunity of operating with the assistance that a well trained anesthesiologist can offer will find it difficult to realize the relief that is afforded in being able to devote his entire attention to the surgical problem in an ill patient with the assurance that the general condition of the patient rests in competent medical hands. Better surgery inevitably results when the surgeon does not have to divide his attention between the operative field and the patient's blood pressure. The speaker, because of one or two unhappy experiences as the result of indifferent anesthesia, approaches a difficult operation with far more misgiving from the standpoint of the anesthesia than from the question of the technical procedure. This is not prompted by egotism but rather by a realization that despite the fact that the surgeon is responsible for the anesthesia there is little he can do to control it once the operation is in progress. If, on the other hand, a well trained physician anesthetist is available, the surgeon has the comforting thought that, come what may, the patient is in the hands of one who knows more about anesthesia than he does.

The hospital administration should also be concerned in good anesthesia for an infrequently considered advantage is the shortening of patient hospital days by the lessening of post-operative complications. Early ambulation, which is becoming increasingly popular, is predicated upon the rapid recovery of the patient from the effects of the anesthetic. If this is retarded by poor anesthesia or the development of an upper respiratory infection, the patient remains in the hospital longer than necessary and this is a hardship on the individual and institution alike in this time of crowded hospitals.

Another factor that makes a physician desirable from the hospital standpoint is the relative permanence of such an appointment. A physician anesthetist feels that his interests are advanced by remaining in one community just as is the case with any other staff member and the problem of providing a replacement does not arise as frequently as it does with technician anesthetists.

The pre-operative evaluation of a patient with special reference to the type of anesthesia indicated should be largely determined by the trained anesthetist. Many other allied activities are appropriately supervised by the anesthetist. He may be used in a consulting as well as a therapeutic capacity with regard to vascular and nerve lesions. Paravertebral sympathetic injections and nerve blocks for diagnosis and treatment fall within his province. He is usually the last court of appeals in lumbar punctures and in difficult venapunctures for intravenous fluids and transfusions. In some institutions all oxygen therapy is under his direction.

The speaker does not wish to give the impression that all operations require the services of a physician anesthetist. All of us realize that nurses have administered the large majority of anesthesias that have been given in Virginia and they have given

them extremely well. The patient in good condition who has an operation of average magnitude will do about as well with either type of anesthetist. But the poor risk patients and especially those who are subjected to the formidable procedures which are becoming more and more frequent on our operative schedules are the ones who should have the benefit of a physician anesthetist. Nurses do not relish the responsibility of handling this type of case and it is as unfair to them as it is to the patient to ask them to do so. One physician anesthetist in a hospital of moderate size is adequate to care for the more difficult cases and he is also available to help in any emergency which may arise during the course of other operations in the same hospital. Nurse anesthetists appear to welcome the moral support afforded by a physician anesthetist in the same building.

The Army Air Forces were fortunate in having a number of well trained anesthesiologists in the larger hospitals and in addition to the above duties this medical officer usually was in charge of operating room personnel and equipment. In many military hospitals the anesthetist directed all shock therapy.

The Armed Services rapidly realized the importance of the trained anesthetist and the great increase in the number of physicians now receiving training in anesthesiology is due largely to the stimulus this specialty received during World War II. Anesthesiology was given an opportunity to prove its case and become established during the recent War just as the specialty of orthopedics had done during World War I. Returning military surgeons should find their anesthesia needs met as satisfactorily in civilian practice as they were in military life but this is not generally true in Virginia at the present time.

The question arises as to how this situation should be improved in Virginia. The demand for well trained anesthetists is considerably greater than the supply. At the present time there are only 84 hospitals in the United States which are approved for Residencies and Fellowships in Anesthesiology by the Council on Medical Education and Hospitals of the American Medical Association.[2]

These hospitals provide a total of 260 residencies and assistant residencies in this specialty. As these services are from 12 to 36 months it is probable that not over 125 physicians complete their hospital requirements in order to take the board each year, for a minimum of two years of supervised clinical instruction and graduate study in the basic sciences is required for eligibility. The nearest hospital that gives a course in anesthesiology is located in Washington, D. C., and this offers only one appointment annually for a 12 months period which makes it necessary for the candidate to spend at least one additional year under supervision elsewhere. The closest hospital that offers a two year course is located in New Jersey. This means that the likelihood of well trained men locating in Virginia is remote unless we make a special effort to attract them or provide means of training physicians in this specialty in Virginia. The latter course appears more feasible.

This training should be provided in the two large teaching hospitals connected with the medical schools in Richmond and Charlottesville. The clinical material, the provision for instruction in the basic sciences and the other aids that are found in a teaching institution are all present in these two schools. By establishing residencies in this specialty these hospitals would be assured of a constant supply of physicians who would provide excellent anesthesia while receiving instruction, and the hospitals in Virginia would be able to obtain the services of these men after they had completed their course. A full-time anesthetist and one assistant should be sufficient to handle the clinical as well as the teaching assignments and still permit some time for original work in a field which offers much to an investigative mind. Each teaching hospital could provide sufficient clinical material to permit training at least three assistant residents and resident anesthetists continuously on the basis of a two year course. This would provide three well trained physicians each year to make up the deficit in trained anesthetists now existing in this area.

There are, no doubt, physicians in Virginia who are interested in this specialty but who do not wish to specialize in this branch of medicine exclusively. A one year course in this subject could also be provided which would qualify them as well trained anesthetists and capable of heading this department in the small to moderately large hospitals in this state on a part time basis.

To summarize, I would again like to point out

that Virginia has lagged behind the country at large in failing to utilize the services now offered by trained medical anesthetists. In order to correct this we need centers for the training of physicians in this specialty and this function logically should be assumed by the University of Virginia and the Medical College of Virginia. If such a program is adopted, these teaching hospitals at once will receive the benefit of improved anesthesia, the hospitals throughout Virginia will soon have a supply of anesthesiologists available and, most important of all, our patients will be operated upon under the most favorable conditions it is within our power to provide.

REFERENCES

1. Personal Communication to author, August, 1946.
2. *J.A.M.A.* **131**:1322 (August. 17), 1946.

312 Medical Arts Building.

DISCUSSION

DR. E. C. DRASH, Charlottesville: Dr. Warthen has pointed out one of the greatest needs in the State of Virginia at the present time. Before the war, at the University of Virginia this question of the training of anesthetists had been brought up; but the advent of the war prevented our carrying out our plans any further. As Dr. Warthen has stated, the training of anesthetists should take place in a University Hospital where all the facilities for research and study are available.

All the new advances in anesthesia have been made by physicians and not by nurses. I am sure none of us wishes to detract from the credit that is due the nurses in anesthesia, not only in Virginia but everywhere. At the beginning of the war the University unit, the Eighth Evacuation Hospital, was furnished with a table of organization which permitted us to have two nurse anesthetists. One nurse was registered; one was not. Unfortunately, the table of organization did not explain to us what to do when we needed additional anesthetists. It was our good luck, however, to have assigned to us a well trained M.D. anesthetist, and I am sure the presence of this man was largely responsible for the efficiency of that hospital. He not only improved the work of these nurses we started with, but trained four additional nurses, trained one dentist in anesthesia, and trained four medical officers in anesthesia. So, during times of push, when we had large numbers of battle casualties to care for, we had a large number of competent anesthetists at all times.

I should like to say that the University of Virginia is cognizant of this need and a sum of money has been set up in the budget to employ such a man. As has been suggested, such an individual should be well trained in physiology, in chemistry, in pharmacology, and in anesthesia. We hope that in the near future such an individual can be obtained, to begin the work at the University of Virginia, and at the Medical College of Virginia.

Many operations now being done are very prolonged procedures. Four hours is not unusual in an intrathoracic or intracranial operation. During that period all sorts of things can happen, and I am sure that anyone who has experienced the skill of a competently trained physician-anesthetist would not want to be without one. I hope that soon both schools can establish a program for the training of physician-anesthetists in Virginia.

DR. FRANK S. JOHNS, Richmond: I am glad that the importance of having the department of anesthesia under a graduate in medicine with special training in this field has again been brought to our attention. For 25 years we have had the benefit of this important adjunct to our surgical department, a doctor of medicine, trained in anesthesia, in charge of our anesthesiology. To the patients it has given the greatest comfort, and to the surgeons the satisfaction of knowing that our surgery is being carried out under the best possible conditions.

As soon as hospitals begin to pay adequate salaries for the service of doctors trained in anesthesiology they will receive the important benefits of better anesthetics.

DR. SEYMOUR SCHOTZ, Richmond: The discussion has been very gratifying. I should like to introduce myself. I have recently come to Virginia for the purpose of setting up a practice in anesthesiology. The subject, to me, is very timely. I feel there is a good job to be done in the State; and I hope that those of us who are experienced and trained in anesthesia can contribute and arouse interest, so that every hospital, small and large, can have the services of a man trained in anesthesia so that all patients, whether the operation is major or minor, can have the benefit of having a trained man on hand to render assistance if necessary.

This discussion is very interesting at this time because the centennial is being held in Boston. It was just one hundred years ago when Dr. Morton gave his demonstration in that city.

I do not think many problems are solved in meetings like this. If we could get together afterwards over a glass of beer or a cup of coffee doubtless many of them could be threshed out.

DR. EVERETT IDRIS EVANS, Richmond: I was very glad to hear Dr. Warthen's paper about the importance of physician-anesthetists. It does seem rather queer, as Dr. Schotz said, that it has taken almost a hundred years for us to get seriously interested in this matter.

I have been in almost monthly contact by letter with some of the leading anesthesiologists, and two things come to my mind. Dr. Henry K. Beecher wrote last month that fourteen of the medical schools of this country are now trying to find professors of anesthesiology. That shows the demand. What are they being offered? Most of the salaries run from $10,000 to $15,000 a year. An appointment to a Medical School Chair in Anesthesiology should be made on the same basis as for other professional appointments, and not on the basis of simple technical skill in the administration of an anesthetic agent.

PROTRUDED INTERVERTEBRAL DISKS AS A CAUSE OF DISABLING PAIN AND PARALYSIS*

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Since Mixter and Barr[1] established the fact that fragments of intervertebral disks could irritate and compress the root of the sciatic nerve intraspinally and produce low back and sciatic pain, the syndrome of protruded intervertebral disk has become well established. It is now known that fragments of the intervertebral disks may be protruded at any level in the spinal canal with resultant symptoms of pain, paresthesia, weakness, loss of sensation, loss of intestinal and vesical function, monoplegia, hemiplegia, paraplegia and even quadriplegia, followed by death when vital tracts in the spinal cord have been irreparably damaged.

The protrusions most often occur in the lumbar region of the spinal canal and in this region the last two disks are most often affected. As a result, the commonest symptom of protruded intervertebral disk is low back pain with or without sciatic extension.

In the cervical region the fifth, sixth and seventh disks are those most often involved; the resultant symptoms are pain in the neck, upper extremities and upper part of the chest, with or without paresthesia, anesthesia and weakness. If the protrusion occurs laterally in the spinal canal and involves only one nerve root, the distribution of the pain is in the region supplied by the nerve which takes its origin from that root. If the protrusion is large or midline in position, then the syndrome of Brown-Sequard or even quadriplegia may develop.

In the thoracic region of the spinal canal the lesion is likely to produce root pain‡ or paraplegia, depending on the size and site of the protrusion.

Lumbar protrusions are by far the most common, constituting about 95 per cent of all protrusions of intervertebral disks in the experience at the Mayo Clinic. Since the spinal cord terminates in the cauda equina at the first lumbar vertebra, there is more room for a space-taking lesion in the lumbar portion of the spinal canal and, as a result, a lesion must become large before extensive neurologic signs develop. The intact posterior longitudinal ligament helps to maintain the intervertebral disks within the confines of the intervertebral spaces and to return the normally bulging disk to its normal shape after motion of the spinal column and after slight trauma. If trauma, stress or strain is sufficient to rupture the posterior longitudinal ligament, then the annulus fibrosus may give way and permit bits of annulus and nucleus pulposus to project into the spinal canal and remain there. Then the anatomic and pathologic condition known as "protruded intervertebral disk" occurs.

Since the lateral portions of the posterior longitudinal ligament are the weakest parts, the protrusion is most likely to occur laterally and to result in root pain if the corresponding root is irritated or compressed. If the posterior longitudinal ligament is unduly stretched or torn, but there is no encroachment on the nerve root, low back pain alone may result. In many cases in which ultimately operation is performed for a protruded intervertebral disk which has caused full-blown incapacity as a result of low back and sciatic pain, the physician may obtain a history of recurring bouts of low back pain or lumbago extending over a period of years. A majority of protruded intervertebral disks occur at the last two lumbar interspaces and, since this is the site of exit of the roots of the sciatic nerve, sciatic pain is the chief symptom of protrusion of a disk. If the protrusion occurs at the third lumbar interspace, the pain is likely to extend down the front of the thigh and the patellar reflex may be diminished or absent.

Protruded intervertebral disks are accepted rather generally as being traumatic in origin. The trauma may be, and often is, slight and may be overlooked or forgotten by the patient.

The acute attacks of pain resulting from protrusion of an intervertebral disk may subside on rest in bed and the application of heat to the involved part of the back. The use of diathermy is

*Read by invitation before the Virginia Peninsula Academy of Medicine, at Newport News, Va., January 20, 1947.

‡Root pain is pain experienced in the course of a nerve root or the nerve taking its origin therefrom and is usually aggravated by coughing, sneezing, jarring and straining at stool. It is usually worse at night.

often helpful. In the more severe attacks in cases in which low back and sciatic pain or either occur, traction on the lower extremities may be required. For protrusion of disks in the cervical region, traction on the head often proves of benefit in overcoming spasm of muscles.

In the examination in a classic case of protrusion in the low lumbar region, the patient may be found lying uncomfortably in bed or walking with a limp and with body tilted—the so-called sciatic scoliosis. The erector spinae muscles are in spasm and the normal lumbar lordosis is lost. Motions of the spinal column are painful and limited. The so-called straight leg raising test is positive on the side of the pain; lifting of the opposite extremity with the knee extended may result in pain referred to the back and to the involved extremity. If sciatic pain is present bilaterally, then the straight leg raising test is positive bilaterally. There is often tenderness along the course of the sciatic nerve. The Achilles tendon reflex is often diminished or absent. This reflex is more likely to be affected if the protrusion is at the fifth lumbar space. Some impairment of sensation in the dermatome of the root involved and some weakness of muscles may occur, but these are uncommon.

Every patient suspected of having an intraspinal space-taking lesion should receive a careful general physical examination, including examination of the blood and urine, as well as roentgenologic examination of the chest and the appropriate part of the spinal column. In addition, knowledge of the result of a flocculation test for syphilis and of the sedimentation rate of the erythrocytes may help the physician to avoid errors.

Ordinary roentgenograms of the spinal column will not give sufficient evidence on which a diagnosis of protruded intervertebral disk can be made, but they will help eliminate many other conditions which might produce a similar symptom complex.

It is my belief that no patient should have his spinal cord exposed without previous lumbar puncture. So, if the patient's general condition does not contraindicate a major surgical procedure and his symptoms cannot be alleviated by conservative measures, the next step in the examination is diagnostic lumbar puncture. This procedure may be combined with that of visualization of the spinal canal—so-called myelography.

There is diversity of opinion regarding the necessity and even advisability of performing myelography and even of lumbar puncture in these cases. My opinion is that many useless operations will be avoided and those that are necessary can be carried out more satisfactorily if the surgeon knows what the value for total protein of the cerebrospinal fluid is, whether or not he is dealing with one or multiple lesions and what the exact location of the lesion is. A value for total protein of 100 mg. per 100 c.c. of cerebrospinal fluid is seen rarely in cases of protruded disk. A high protein content usually indicates neoplasm.

If a diagnosis of protruded intervertebral disk is made, and the disk is to be removed surgically, the operation should be performed as soon as possible after lumbar puncture and after a report of the results of the spinal fluid examination has been obtained. Only that part of the disk which is fragmented need be removed. It is not necessary to curet out the disk and to try to remove all disk substance. Complete removal of all disk substance seems impossible, is dangerous and evidence secured in follow-up of patients does not indicate that it is necessary. Ordinarily laminectomy or even hemilaminectomy is not required for removal of a lumbar protrusion. After removal of the ligamentum flavum, interlaminal removal of the protruded fragments of disk is usually possible; however, one should not sacrifice safety or risk damaging the root further in order to perform this specialized technic. Until a surgeon has had considerable experience with intraspinal technics he should remove enough bone to expose adequately the involved nerve root.

If fusion of the vertebrae in the region affected is deemed necessary because of coexistence of spondylolisthesis, spondylolysis or other conditions resulting in an unstable back, the combined procedure, that is, removal of the protruded disk and fusion, preferably should be done at the same operation.

After removal of a protruding lumbar disk the patient may be up and around as soon as he feels like it, usually within two or three days. He is able to leave the hospital in seven or eight days. When a combined operation is performed, the patient is kept in bed by the orthopedic surgeons for three weeks, but no cast is used.

The operative mortality rate for protruded intervertebral disks at the clinic has continued to be less than 0.25 per cent.

The rate of recurrence of protruded intervertebral disks over a five year period is about 5 per cent. At present we do not know how, for sure, to prevent recurrences. A meticulous technic on the part of the surgeon and the avoidance of heavy lifting and straining on the part of the patient until the posterior longitudinal ligament has had time to heal are advocated.

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Directory Plans Underway.

At least two carloads of special lightweight paper will be required for the new American Medical directory, a 3,000-page volume which normally is issued every two years. It is now almost five years since the 17th edition of the directory was published in 1942. The delay has been due to the shortage of clerical help and mechanical labor in the Chicago area as well as to the scarcity of paper.

The Superintendent's Office, which supervises printing production at headquarters, reports that the paper shortage existing for some time has presented one of the biggest problems in getting out the directory. Because of the shortage of compositors in our printing department, composition work on the directory will probably have to be done outside of the A. M. A. plant. Printing, however, barring unforeseen problems, may be done on the A. M. A. presses.

It is hoped that compilation of names will be started within the next few months, so that the 18th edition will be ready for delivery by at least the latter part of 1948. Since publication of the 1942 edition, information on 37,462 new physicians has been added to the files, and the names of 17,860 physicians who have died have been deleted.

Orders for the new directory are NOT being accepted at the present time, but as soon as plans are completed a letter, prospectus and card asking for directory information and advance orders will be sent to every physician in the U. S., its possessions and Canada.

Incidentally the A. M. A. is presently using 310 tons of paper a month for The Journal, Hygeia and the many other special journals devoted to specific fields of medicine.

Poliomyelitis Diagnosed within 24 Hours.

Diagnosis of infantile paralysis can usually be made within 24 hours of the onset of the disease, according to John F. Pohl, M.D., of Minneapolis, and treatment should begin immediately in order to relieve the discomfort of patients and to minimize crippling.

Writing in the July 26 issue of *The Journal of the American Medical Association,* Dr. Pohl, who is from the Elizabeth Kenny Institute, states that "an analysis of 1,125 cases of poliomyelities treated in Minneapolis during the 1946 epidemic reveals that the symptoms and observations are sufficiently characteristic to enable the diagnosis to be established in most patients within 24 hours of the onset. The study also discloses that paralysis is not a useful diagnostic sign because paralysis or weakness of the muscles is not a common early event and in a considerable number of cases does not occur at all. To await the appearance of paralysis to confirm the diagnosis or to begin treatment is inadvisable."

Of the 1,125 cases, 736 or 65.4 per cent progressed to paralysis of some degree within 15 days of onset but 389 or 34.6 per cent did not show paralysis at any time. Sixty-eight patients or six per cent died.

Symptoms of the first 24 hours are: headache, fever, nausea, vomiting, loss of appetite, stiff neck, stiff back, painful arms and legs and general malaise with listlessness.

PRACTICE OF PSYCHOSOMATIC MEDICINE*

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Over 2,000 years ago, Plato said: "So neither ought you to attempt to cure the body without the soul; and this is the reason why the cure of many diseases is unknown to the physicians of Hellas, because they are ignorant of the whole; which ought to be studied also; for the part can never be well unless the whole is well . . . for this is the great error of our day in the treatment of the human body, that physicians separate the soul from the body".[1] Somewhat later Aristotle wrote: "Probably all the affections of the soul are associated with the body—anger, gentleness, fear, pity, courage, and joy, as well as loving and hating; for when they appear the body also is affected." Paracelsus in the 16th century said: "He who wants to know man must look upon him as a whole and not as a patched up piece of work." In the early 18th century the philosophers studied the mind and the medical men the body and the body only. About the time gold was discovered in California the cause of mental disease was still sought in the badness and sinfulness of man.

Psychosomatic medicine is thought by many to be a new term. Nassie and Jacobi's investigations in the 19th century resulted in Jacobi's paper, "Further discussions of the foundations of somatopsychic medicine." Therefore, the first use of this term occurred over a hundred years ago.[11] The word "psyche", taken from the Greek, means "soul", and the word "soma" means "body". "Psyche", says Binger,[1] "relates not only to the mind and thinking but sensation and thinking, and life of the emotions as well." The reappearance of the term "psychosomatic medicine" and of the concept of the patient as a whole, which began over a century ago, is a new attempt to produce today a synthesis of man's total reactions.

All emotion is accompanied by physiological change—sorrow with weeping; joy with laughter; shame with blushing; fear with palpitation and sweating; anger with increased blood pressure and carbohydrate changes.[2, 9, 4, 3, 8] Changes in striated and smooth muscle tension, in secretion and circulation produced by mental stimuli, result in functional change which is reversible. *But long continued emotional stress may produce organic or definite irreversible change.* Hyper-activity of the heart can cause increase in size, and an hysterical paralysis can produce degenerative changes in affected muscles.[6]

The following is a partial analysis of 200 case reports:

SEX	No.	%
Males	114	57.0
Females	86	43.0
Total	200	100.0

MARITAL STATUS	No.	%
M.	126	63.0
S.	41	20.5
W.	16	8.0
D.	17	8.5
Total	200	100.0

SITE OF CHIEF COMPLAINT	No.	%
Multiple	96	48.0
G. I.	53	26.5
Musculo Skel.	13	6.5
Resp.	9	4.5
Heart	9	4.5
Head	7	3.5
N. S.[1]	5	2.5
Genital	3	1.5
Urinary	3	1.5
(Diabetic)	2	1.0
Total	200	100.0

1. Four were multiple sclerotics, two of whom were previously diagnosed as neurotic.

PSYCHIATRIC GROUPING	No.	%
Anxiety	105	52.5
Depression	31	15.5
Menopausal Syndrome	16	8.0
Tension	16	8.0
Male Climacteric	4	2.0
Not Classified	8	4.0
Psychotic[2]	20	10.0
Total	200	100.0

2. In this group 9 patients had a provisional diagnosis of psychosis and 11 were considered "nervous patients".

*Presented in part at Staff Meeting of Grace Hospital, Richmond, December 6, 1945.

Read at the annual meeting of the Medical Society of Virginia at Virginia Beach, October 14-16, 1946.

Of those previously diagnosed as neurotic, 1 had metastatic carcinoma of the spine, another herniation of cervical disc and 1 had spondylitis deformans. One patient thought to be psychotic, but too disturbed to permit examination, was found to have brain tumor. Surgical operations averaged 1.5 per patient. The average number of physicians seen per patient was 5, ranging from 2 to 30.

In this series of 200 cases, certain major factors are dominant. The patient has been seen by many physicians but has not been permitted to tell his story. Questions concerning his illness have not been answered to his satisfaction. He has been told that his illness is imaginary, he "must snap out of it", "pull himself together", "get hold of himself or he'll go crazy". After such remarks have been repeated several times, the patient has acquired another anxiety which he demonstrates by his question, "Doctor, do you think I'm crazy? They tell me it's just my nerves and there's nothing the matter with me. I've tried and tried but I just can't forget that pain".

An excellent somatological history and examination have been done and often repeated but no attempt to associate the pain with the emotions is made. We often forget that there is psychopathology as well as tissue pathology. The traditional approach to the problem must be altered by treating the patient as well as the disease.

There is no standardized approach to the management of these patients. Each should be individualized. The conventional medical history is without much value. It is best to permit the patient to tell his own story without interruption and, if possible, without notetaking by the interviewer. For this, ample time should be arranged.

It is quite usual for the patient to be following a restricted routine which he generally detests. Release from as many "musts" and "have to's" often produces remarkable results. Clinical evidence of malnutrition was present in 100 per cent of the group; therefore, it is believed that tension states, anxieties and related ills result in impaired absorption and assimilation. Brewer's yeast and B-complex in therapeutic doses by mouth are not well tolerated or utilized by these patients. Because of this, parenteral administration in large doses has been used with gratifying results.

After several interviews, complete physical and neurological examination is done and the findings dictated in code. Much can be learned from this. The presence of tachycardia, moist palms and soles, hyper-active but usually equal reflexes, tremor of tongue and hands, and slight incoordination are significant. Movement of a "stiff" joint or painful member (the release of striated muscle tension) can often be accomplished during the course of an apparently irrelevant but friendly conversation instigated by the examiner. As noted by Flanders Dunbar,[6] release of muscle tension is often accompanied by release of long pent up speech. Much significant information can be obtained in this manner. It is quite possible that symptoms of early multiple sclerosis can be interpreted as "neurosis". Of 4 multiple sclerotics, 2 of this type were seen.

The psychiatric survey should be done with great care. Many patients are only too familiar with stereotyped procedures. Much more can be learned from a patient by having him talk about himself rather than of his disease. The psychoses are often masked. What may have been classified as a simple neurosis may prove to be severe mental illness. The differentiation requires training in psychiatry. Because certain unresolved factors may be deeply rooted in the subconscious, prolonged psychoanalysis may be necessary. This is no job for the novice, as overenthusiastic mental probing may aggravate an existing condition. Psychotherapy need not always be complex. Much can be accomplished during the first interview if the physician has the desire to understand a fellow human being.

Satisfaction of the basic hungers is not always possible nor is the patient always conscious of his hunger, which may be expressed somatically. The explanation of "organ language" by Weiss and English[9] may illustrate this important point. Sensitization to certain conditions can occur in childhood,[7] thus producing what may be called an allergy to circumstance.

In conclusion, more understanding of the patient as a whole is needed. The old idea of "either" organic "or" psychic must be disregarded as there can be no true separation.[9] Emotions are linked with bodily changes and, reciprocally, there is a psychic component to visceral disease.[5] Integration may tend to abolish the "thick chart" patient of the clinics and this can be accomplished only by in-

stilling psychosomatic concepts into students during, at least, the clinical years of our medical schools.[5]

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DISCUSSION

DR. HOWARD MASTERS, Richmond: Dr. Williams has presented a subject of which the professional world has become more conscious. It has taken the profession a long time to recognize and accept the mind as an integral part in the functioning of the organism. We might as well accept the fact that medical practice requires time with the patient; the physician who is not a good and patient listener may easily lose the key to the illness. Osler's blanket statement appears sufficient to initiate the discussion: "Psychosomatic medicine is that part of medicine which is concerned with an appraisal of both the emotional and the physical mechanisms involved in the disease processes of the individual patient, with particular emphasis on the influence that these two factors exert on each other and on the individual as a whole."

It is important for us to take seriously the patient's statement of his symptoms or problems and to recognize that these complaints are real to that patient, irrespective of their functional nature. The citizen's concept of a political problem is frequently vastly different from the politician's concept, because the citizen is not a trained politician; neither is the patient trained in medical science, and, therefore, his concept of his symptoms is either the product of his own thinking or of the suggestions of other uninformed and sometimes ignorant individuals, thus producing a fear for one's individual or personal welfare.

The mind is susceptible not only to the suggestions of others but also to autosuggestion. Sometimes the emotional conflict is not adequately expressed, especially when the emotion is not in response to what seems to be the real situation. This constitutes a threat or danger to the individual which produces a physical concomitant or symptom which threatens the security of the individual. This serves to upset the individual's regulatory equilibrium. Some of these inappropriate emotional reactions toward the environment may become inhibited by the patient and be pushed back into the unconscious, where they create a state of tension, either permanently or recurrently, and tend to operate to disturb the functional equilibrium. A patient may laugh, cry, go into a rage, suffer palpitation or respiratory disturbance in the absence of an external stimulus when these reactions have operated long enough to become conditioned responses. The patient frequently says, "I do not know of anything that precipitates my reaction." Not infrequently the reaction may be one of reversion to an earlier age level, which should cause us to begin to search for causative factors in the patient's history or his environment at that level.

We must recognize that when these reactions take place over and over again some body changes must be present. If, for instance, fear is the reaction, physiologically the body must respond to fight or take flight. This reaction involves the vegetative nervous system and alters the blood chemistry according to the psychological nature of the individual. If it is aggression, the blood sugar should rise; if it is escape and flight the blood sugar should drop; and appropriate somatic sensations accompany the reaction.

An interesting example of the recurrence of this reaction in a state of psychic tension is revealed in the history of a young woman, 22 years of age, who, on the first day of entering school at the age of five, returned home and found that her father had left to go to the bedside of his ill mother, who later died. After that, when her father would take her to school she would go in the front door and out the back door, return home, and hide in the garage until school was out, then go into her home as though she had attended school. When this was discovered she said she was afraid. A psychiatric examination revealed that she returned home, where she could be close to her mother and watch her, for she feared that if she were away her mother might die before her return. Later, when a few years older, under psychiatric instruction she was permitted to see several dead people who were in no way related and to whom she could have no emotional attachment; and there was no visible appearance of fear. At another time

she was taken to a funeral, without expressing any fear. This was to desensitize her to the fear of dead people.

In college she altered her major course from music to psychology and in the summer worked in a psychiatric hospital as a nurse's aid and attended some lecture courses. She then decided to study medicine and returned to college to take her premedical work, but the basic scientific work was boring and uninteresting to her, and she abandoned her training to take a business course. She held one job well but was not satisfied with it because she wanted to do secretarial work in a psychiatric hospital. She obtained such a position and did excellent work. After six months she developed some elation, psychomotor activity, and did not want to go to sleep. About ten days after this began she displayed considerable interest and some mild elation during a period of several weeks of serious illness of a hospital patient, which terminated in death. A few days later a relative of a close friend died, and she attended the funeral and viewed the body.

During her period of elation she slept very little and reduced her food intake to approximately one meal a day. By about the fourth week she had an emotional collapse. She had lived in a home where she had to be excessively quiet and unable to express herself with the average degree of freedom. This had become monotonous to her, and she had obtained another place to live, but the collapse came when she learned this would not be available to her. During this four weeks she could not tolerate any change of method or procedure for fear she could not perform the duty assigned to her. She had a strong urge to run away and go as far as her month's salary would take her. Under sedation she became exceedingly confused and, following it, made numerous attempts to run away. Her blood-sugar level was a flat curve of between 90 and 100; her cholesterol was increased 255 mg. 100 c.c.; her electrocardiogram showed extra systoles and low voltage wave sometimes found in nutritional disturbance. She developed an uncanny interest in death and had a strong urge to return to the side of her mother.

Unconsciously this patient had suffered for many years from fear of the responsibility of herself. She had not emancipated herself from her mother. She obtained the position in the psychiatric hospital because, unconsciously, she wanted protection, but she did not become aware of this fact until her illness had become established. The running away is simply a revival of her earlier fear of death; she exhibited the same psychopathological pattern that she did when she ran away from school and went home. In this case we have an anxiety neurosis, a compulsive reaction, and somatic disorders as the result of years of emotional tension.

We must not, however, overlook the organic possibility of patients with functional symptoms. I have a long series of patients referred in the hospital with a diagnosis of hysterical paralyses or psychosomatic symptoms, whom I diagnosed as having brain tumor (with operative proof) or other organic neurological conditions, such as disseminated sclerosis and paresis.

The important factor is that the complete study which should rule out evidence of organic disease should be made when the patient is first seen. A physician may spend hours on psychotherapy and then, because of the patient's sometimes persistent complaints of physical symptoms, destroy the therapeutic progress by X-raying or re-examining the patient physically. This simply abolishes the patient's confidence in the physician.

DR. T. DEWEY DAVIS, Richmond: This paper of Dr. Williams' I think carries some very important implications to every physician—general practitioner or specialist. It was rather interesting to me some years ago to analyze a large series of individuals with gastro-intestinal complaints as to what might be responsible for those complaints. Approximately fifty per cent of those individuals who complained of indigestion proved to have functional disease as the cause of their symptoms. Approximately twenty-five per cent proved to have organic disease but with a large functional element besides, and the remaining twenty-five per cent were largely organic alone. To my mind, from the treatment standpoint or the planning of the treatment, the patients in this twenty-five per cent with combined organic and functional disease are the most difficult to handle, because one is dealing with something that might be corrected mechanically, by surgery, and something that may be entirely functional; and to decide whether Miss Smith should have her gall-bladder taken out or not taken out is really a medical problem. I teach my medical students that these are perhaps the most difficult of gastrointestinal cases to handle.

It should be emphasized, as Dr. Williams told us, that a functional state can produce organic changes if it persists long enough. We are convinced that peptic ulcer is a functional disease that has organic manifestations. That cannot be proved because we do not know what causes peptic ulcer. We do know, however, that the emotional surges which come under stresses and strains can certainly aggravate the manifestations of peptic ulcers. We also know that long nervous tension can produce changes in the cardiovascular system. I just this last week saw a man of about my age with hypertension, headaches, and the various changes that go with that condition. I have known this gentleman a long time. He is one of those individuals who have been successful, but to attain that success he has worked night and day, trying not only to run a good-sized establishment but to do the work himself. That condition has persisted for five years. He has had repeated injections of vitamin B and has had numerous doses of oreton, by other physicians, but nobody has told him to quit what he is doing. It may now be too late for him to quit in time to be helped.

There are certain individuals who cannot stand these things, and those are the individuals whom we have to slow down. It is trite to say that in the last few years

we have had to deal with an increasing number of individuals with these emotional reactions; and the largest handicap I myself have found, in having to deal with this large group of individuals who require a lot of time to straighten them out, is that I do not have the time to give them. I have been most happy to see the young men come back and take away some of these patients from me, because I can give patients more time—adequate time, I hope; at least my conscience is clearer. Repeated sound advice is more important than medicine in dealing with individuals of this type.

DR. WILLIAMS, closing the discussion: I certainly appreciate the thoughtful and rather sympathetic discussions of Dr. Masters and Dr. Davis. I have nothing to contribute further. I think they have shown in their remarks that there is certainly a strong environmental factor in many illnesses, and they have brought it out. I agree with Dr. Davis that a patient with combined illness—one having a definite organic illness such as peptic ulcer or a diseased gall-bladder and also having some neurotic symptoms—must be handled with extreme care and patience, and it does require a great deal of time.

I am extremely gratified that two men under whom I had the privilege of studying should have commented on this paper.

Many Patients Have Emotional Illness Complicating Physical Disease.

At least one half of all patients have their symptoms as a result of emotional difficulties in addition to and as a part of the physical disease, according to Raymond W. Waggoner, M.D., of Ann Arbor, Mich.

"Every patient will respond more promptly to treatment of any disease if the physician understands and adequately handles the emotional as well as the physical aspect of the illness . . . therefore it is essential that every physician, whether he is in general practice or in a specialty, obtain some understanding of psychiatric principles and utilizes these principles in the treatment of all of his patients," states the author.

Writing in the June 28 issue of *The Journal of the American Medical Association*, Dr. Waggoner, Professor of Psychiatry at the University of Michigan points out that only about two per cent of the registered physicians in this country are trained in psychiatric procedures; therefore the task of treating emotional illness falls upon the general practitioner.

"Recognition of the importance of emotional factors in illness, a willingness to spend more time with such patients, and understanding of some of the motivating factors in such conditions and the ability to help in the solution of such problems is an essential characteristic of every good physician," states the author.

The physician cautions that since patients tend to exaggerate symptoms of physical illness, great harm can be done by the prescription of unneeded rest.

Handbook On Health Resort Therapy.

The Committee on American Health Resorts of the A. M. A., which was formed in July 1940, met in Chicago recently and voted to have Secretary Howard Carter probe the possibility of publishing a handbook on health resort therapy. They also reviewed the application blank and rules for listing health resorts and voted that mineral waters, commercially bottled at spas, be considered and investigated the same as a drug preparation.

Virginia members of the Committee are Drs. M. B. Jarman, Hot Springs, and Frances Hellebrandt, Richmond.

UNUSUAL TUMORS OF THE ABDOMEN*

RUSSELL BUXTON, M.D.,
Newport News, Virginia.

During the past ten year period, a number of patients have presented themselves for diagnosis or treatment who have been found to have abdominal tumors of an unusual type. Of these patients nine have been selected as being of sufficient interest to bring to your attention. In presenting these cases it should be made clear that this is not an attempt to report a group of cases with the same final diagnosis, but an effort is being made to bring together cases which have as their presenting sign, or most important finding, a tumor or swelling of the abdomen.

A brief resume of the nine cases in chronological order will be presented; each will show the pre-operative, final diagnosis, and end-result. It is felt that there are some definite conclusions which may be reached by a study of these cases:

Case 1.—C.J. This patient, a 63 year old ship inspector, was admitted to the Hospital June 15, 1937, with a history of abdominal pain and soreness for three months following trauma of the abdomen. On the day of admission a large tender mass was noted just to the right of the umbilicus. He was found to have diabetes mellitus and his temperature was 100.2. This patient was transferred to another hospital before adequate studies were made, his discharge diagnosis being carcinoma of the ascending colon. However, when he was operated upon, a large abscess in the abdominal wall was found, and it was evident that he had had a hematoma of the abdominal wall, which had become infected, and an abscess had developed. His subsequent course was uneventful.

Case 2.—E.H. The patient, a 63 year old white fisherman, was admitted to the Hospital in extremely poor condition with a history of two weeks duration suggestive of intestinal obstruction. He had a fullness in the upper abdomen, on the right side, and a marked elevation of his right diaphragm. His temperature was normal. Duodenal drainage was instituted for two days, but there was no marked improvement and the patient was operated upon with a pre-operative diagnosis of carcinoma of the hepatic flexure of the colon, but a huge mass was found anterior and above the liver. This mass was filled with gas under pressure and thick pus. The appendix was normal but neither the gall bladder nor duodenum were seen. The patient was discharged as improved five weeks following operation and is still living. The final diagnosis in this case was sub-diaphragmatic abscess, with collection of gas, arising from a ruptured peptic ulcer.

Case 3.—O.W. The patient, a fifty year old white carpenter, was admitted to the Hospital May 5, 1944, with a complaint of abdominal pain and a mass of three weeks duration. This had begun following a cold. On examination, a round slightly tender mass was found in the right upper quadrant, apparently attached to the upper pole of the right kidney. A pyelogram was negative but in three days the mass had increased greatly in size, so operation was advised, the pre-operative diagnosis being carcinoma of the transverse colon. At operation, however, there was a large fluctuant mass occupying a portion of the right lobe of the liver. It was found to be a large solitary abscess filled with sterile pus, subsequent studies failing to reveal bacteria amoeba or echinococci, and the abscess was drained. The patient was discharged in two weeks as cured with a final diagnosis of solitary liver abscess, etiology unknown. It is interesting to note that he returned in about ten months with a similar sterile abscess in the abdominal scar which was drained, and he has been well since.

Case 4.—M.C. The patient, a 45 year old colored housewife, was admitted to the Hospital November 11, 1945, with a strangulated umbilical hernia. She was operated upon immediately, and the hernia reduced and approximately twelve inches of gangrencus ileum removed. It was found to be impossible to replace the bowel in the peritoneal cavity due to a tremendous solid tumor extending from the lower border of the right lobe of the liver to the region of the left ovary. Further exposure revealed a parasitic myoma of the uterus which was removed without difficulty. The patient did fairly well for several days but subsequently developed peritonitis following a partial wound disruption and died six weeks after operation. A final diagnosis of strangulated

*Read at the annual meeting of the Medical Society of Virginia at Virginia Beach, October 14-16, 1946.

umbilical hernia and parastic myoma of the uterus was made.

Case 5.—C.V. The patient, an 18 year old primiparous colored girl, was admitted to the Hospital February 4, 1946. Her pregnancy had been normal until the sixth month when she noted a large globular mass to the right of the uterus. At the time of admission a normally gravid uterus could be palpated to the left of the midline and a large fluctuant mass could be felt on the right side extending from the pubic bone almost to the costal margin. The patient was allowed to go into labor spontaneously and delivered a normal child. After delivery the mass was found to be freely movable and fluctuant, distinct from the uterus, and was diagnosed as a cyst of the right ovary. With this diagnosis ten days post-partum, the patient was operated upon and a tremendously dilated right kidney was removed. She was discharged as cured on her 13th post-operative day, with a final diagnosis of pregnancy at term and right hydronephrosis.

Case 6.—L.S. The patient, a sixty-three year old white housewife, was admitted to the Hospital for a cholecystectomy. She had a typical history of chronic cholecystitis, but her past history revealed that she had had a pelvic operation for adenocarinoma of the right ovary. A cholecystogram showed a poorly-functioning gall bladder and a barium enema showed multiple diverticula of the large bowel. At operation, in addition to a diseased gall bladder, containing several calculi, there was a large simple cyst on the inferior surface of the right lobe of the liver. This cyst which was slightly larger than the gall bladder, was thin walled, and was filled with a clear watery fluid. It was removed without difficulty. There was no evidence of metastasis from the ovarian carcinoma. The patient had an uneventful recovery and was discharged as cured, the final diagnosis being chronic calculous cholecystitis and solitary simple cyst of the liver.

Case 7.—W.L. The patient, a 37 year old colored stevedore, was admitted to the Hospital April 10, 1946. He had had a mass in the upper right quadrant for eight weeks and previous studies, including a cholecystogram, a gastro-intestinal series, and a barium enema had been negative, except for a mass thought to be extrinsic to the stomach. Examination revealed a fixed non-tender globular tense mass extending from the right costal margin to the level of the umbilicus. A diagnosis of cyst of the liver was made, and, at operation, multiple retention cysts were found enlarging the right lobe of the liver. These were filled with thick yellow and greenish material similar to bile. All of the major cysts were opened, and packed, and the patient did nicely and was discharged twenty-two days after operation. Shortly after his discharge he began to feel badly and was re-admitted with high fever and hiccups. An attempt was made to drain a sub-phragmatic abscess and a large amount of pus was obtained but the patient died. At autopsy the liver was found to weigh 4.8 kilo. and measured 45x30x18 cms. and extended up to the fourth rib. The right lobe was almost unrecognizable, being replaced with multiple infected cysts. The left lobe also contained many simple cysts which had not been noticed at the time of operation. The final diagnosis in this case was multiple infected retention cysts of the liver.

Case 8.—J.H. The patient, a 56 year old white housewife, was admitted to the Hospital August 27, 1946, with a history suggestive of chronic cholecystitis, becoming acute immediately before admission. A small exquisitely tender mass was present in the upper right quadrant of the abdomen. A pyelogram was negative and, with a pre-operative diagnosis of empyema of the gall bladder, the patient was operated upon. A large abscess of the upper portion of the right rectus muscle was found. There was apparently no communication with any of the intra-abdominal organs and the cavity was drained and subsequent examination proved the pus to be sterile. The patient had an uneventful convalescence, and was discharged to her family physician with a draining wound. This has subsequently healed and her final diagnosis is abscess of the upper end of the right rectus abdominis muscle, etiology undetermined.

Case 9.—H. The patient, a 63 year old white office worker, was admitted to the Hospital September 10, 1946, with a story that he had had indigestion for three months. Gastro-intestinal x-rays, a cholecystogram, and a barium enema were negative. On admission he was exquisitely tender in the right upper quadrant, and had a temperature of 101. There was a tender indefinite mass just below the costal margin on the right side. The patient was operated upon with a pre-operative diagnosis of acute cholecystitis, but, at operation, a small round area of intensely inflamed omentum

was found to be adherent to the peritoneum and to the round ligament of the liver. This omental mass was removed and found to be normal except for inflammatory reaction resulting from ischemia. The gall bladder and duodenum were normal, and the appendix showed only a few old adhesions. The patient was discharged on the tenth post-operative day with a diagnosis of localized inflammatory changes of the omentum, cause unknown.

In summary, nine cases have been presented, all characterized by the presence of an unusual or rare type of abdominal swelling. One of these cases being a simple benign cyst of the liver, although interesting, may be dismissed as incidental, and relatively unimportant. However, despite the fact that a tumor is usually associated with a neoplasm, five of the remaining eight cases were of an inflammatory origin, two being abscesses of the abdominal wall, one an abscess of the liver, and one a subdiaphragmatic abscess, enlarged by gas under tension, and one a localized infected area of omentum. The additional cases consisted of one case of tremendous hydronephrosis associated with pregnancy, a case of strangulated hernia together with a huge parasitic myoma of the uterus, and, finally, a case of multiple retention cysts of the liver. With the single exception of this last case, in spite of what was considered adequate clinical and laboratory studies, a correct diagnosis was not reached in any of the nine cases.

This leads to the following self-evident conclusions:

1. In cases with abdominal tumors, despite thorough clinical and laboratory studies, an incorrect diagnosis is often made.

2. The tumors found in the right upper quadrant may be of a very unusual nature.

Discussion

DR. A. A. CREECY, Newport News: The presentation of these cases is an acknowledgment of the difficulties still encountered in diagnosing correctly masses appearing in the abdomen and a reminder that all available diagnostic facilities should be utilized before bringing the case to operation. The thorough physical examination, the X-ray studies, the judicious use of the gastroscope, peritoneoscope, cystoscope, and proctoscope may reduce the number of operative procedures labeled exploratory. Despite these aids, unusual and unexpected situations will often be encountered and bespeak the necessity for a thorough training in pathology and surgery to enable the surgeon to recognize the lesion and to institute the surgical procedure best suited for recovery.

DR. JOHN POWELL WILLIAMS, Richmond: I should like to cite one case as a tribute to the roentgenologist. I will do it very briefly. We received, at the Veterans Hospital in Richmond, a man who had a history of two and one-half months of continuous fever. He had been hospitalized that long and had been sick several months prior to that time. He had been very thoroughly studied at another hospital with all negative findings, except that they thought he might possibly have a deformity of the left renal pelvis. This was back-checked, and nothing was found except that the left kidney was definitely displaced laterally. So we turned to the X-ray man again and had a gastro-intestinal examination for the second time. That had been done before, with negative results at the other hospital. There was a constant crescent-shaped depression along the upper border of the transverse portion of the duodenum. The circle of the duodenum, where it surrounds the head of the pancreas, was widened definitely. In the lateral view, the stomach definitely showed displacement anteriorly. His conclusion was, from those displacements, that the man had a retroperitoneal mass, which nobody had ever been able to palpate or even suspected during the course of his long illness. The man was explored through a left renal incision. There was a retroperitoneal mass which could be felt extending along the vertebral column as far as the exploring finger could reach, and across the midline. There was also a lymph node which was very conveniently placed for biopsy. This was removed and on examination proved to be very malignant Hodgkins' disease, the Pell-Epstein type.

DR. W. L. PEPLE, Richmond, Virginia: Perhaps I should not undertake this discussion at all because I was under the impression from the title of the paper that it was concerning new growths, which was meant by the term "tumor." I brought along a few slides from a paper which I presented at the Academy under the title of "Strange Tumors."

The first case was that of a married woman in her late thirties who had never been pregnant. She developed a tumor accompanied by irregular bleeding. The tumor was soft and felt for all the world like a pregnant uterus. The more we studied her case, the more puzzled we became as to what it could be. We called in an obstetrician who advised a lipiodol test. The result more than ever convinced us that we were dealing with an abnormal pregnancy. One can see the crescent-shaped area between the tumor mass and the uterine wall, looking just as one would expect it to look if we were dealing with a pregnancy. She continued to bleed and we decided that nothing short of a hysterectomy would be the appropriate thing in her case, no matter what she had. When it was done, it revealed a soft, submucous, degenerating fibroid tumor, about the size and shape of a 2- or 3-months pregnancy. She made an uneventful recovery.

The next case was an unmarried school teacher in her early forties who was said, for a year or more, to be undergoing the change of life. At last she found a doc-

tor who made an examination and he referred her to me. The picture shows a drawing in the long axis of the body; in other words, a sagittal section. You will see a small uterus high up in the abdomen; the vagina is occupied by a large tumor that fills it and presses up into the abdomen. It occupies the whole of the true pelvis. The interesting feature here was the difficulty of approach. The tumor was so large and so tightly fitting the vagina that one could not get in a hand or instrument to detach the tumor from the cervix, so we did a section from above and proceeded as we would with a complete hysterectomy. We then pushed down on the tumor from above and had an assistant, after removing part of it from below, to pull it out of the vagina. It would have required an enormous hole in the vaginal vault to have gotten this tumor through, and it would have inevitably spilled much contaminating material into the abdomen if done any other way. The vagina was repaired from above in the usual way after complete hysterectomy. The patient made an uneventful recovery.

The last slide was that of a little bit of an old maid, some 68 years old and very frail. She came to me with a cancer of her breast, a rather small growth in a very small organ. I took the breast off and two years afterwards she came back with pain in her hip and thigh. I thought she had metastasis in the hip bone or in the pelvis, and I took some X-ray pictures expecting them to look as if the cut-worms had been after her. This is what we found: a perfectly clean hip bone and a fibroid tumor with a calcified center. She had no metastasis at all. Fibroid tumors do not calcify in a short time, and I concluded that she had some rather acute condition to account for her pain. I put her on salicylates and the pain in her thigh left. It would have been quite an operation on so frail a creature to take out her uterus, and probably all that I would have had left would have been a very interesting specimen.

DR. BUXTON, closing the discussion: I thank Dr. Peple and the other discussers for their kindness in discussing this paper.

There is very little that I have to add except to say that I agree thoroughly that we have to follow our hunches in these cases to a large extent. There is no way in the world that anybody can come out flat-footedly and say that any one individual, with these conditions, should or should not be operated on. I do think that, in spite of very thorough study by the internist and the radiologist and the surgeon, many of these cases cannot be definitely diagnosed prior to operation.

Floral Eponym (54)

GLOXINIA

BENJAMIN PETER GLOXIN, FL. 1785

Gloxin was a physician and botanical writer of Colmar. His graduation thesis at Strasburg was *Observationes botanicae* 1785.

Gloxinia is a genus of tropical herbs of the Gesneriaceae family. They have leafy stems and axillary violet flowers. The six species are scarcely known in cultivation. The popular green house plants that are known as gloxinias are really sinningias. Sinningia is a closely related genus from Brazil and is named for Wilhelm Sinning, a German gardener.

VIRUS PNEUMONIA—A BRIEF REVIEW*

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Primary atypical or virus pneumonia was first described in 1935. Since that time there have been increasing numbers of reports showing this disease to be world-wide in distribution, increasing in incidence, and apparently more widely varied in its clinical picture than was originally suspected. Although it has been subsequently described as heretofore unrecognized, this fact does not appear likely when one considers the typical clinical picture, together with the numerous variants that have been brought to attention. Should the causative agent be established as a previously known virus, this would not deter from the fact that this agent has developed a new effect upon the human organism.

The causative agent is considered to be a virus or group of viruses whose type has, as yet, been undetermined. Because of this fact, this disease has been labeled under various terms by different observers. The absence of a specific agent makes any terminology awkward. It may be associated with Q fever, the virus of influenza, or other viruses or combinations of viruses. To the clinician, however, the general term, virus pneumonia, should be adequate for the time being.

Certain cases may go unrecognized because of the mildness of symptoms, and others will not seek medical attention for the same reason, but this is true of any infection. The slow progress and long-continued weakness of many of those under treatment makes one wonder if the percentage of those who do not seek medical attention is not rather small. Certainly, some individuals are seen complaining of weakness following a protracted "grippe" and are essentially convalescent when so seen, but the point is that most persons with virus pneumonia seek medical attention sometime during the course of their disease.

Typically, and in young adults, onset is that of a severe "flu" or "grippe". Usually the complaints are of general malaise, weakness, and a non-productive cough, although the latter may not be present at the outset. The temperature shows considerable elevation and ranges from 101 to 104 degrees, and it is usually septic in type. The blood picture is normal or slightly elevated. Frequently the patient will state that he has had the flu for a few days; then he noticed an increase in his cough and weakness. In early stages, it is frequent that little is found in the physical examination to substantiate more than an upper respiratory infection; later, wet rales are usually present. It is noted that not infrequently the examiner finds changes in breath sounds and rales in the side opposite to that reported by the radiologist as showing consolidation. A paroxysmal, non-productive cough may constitute the only clue that would lead one to suspect the presence of a virus chest infection, in the absence of findings other than fever.

To establish an early diagnosis the most important examination is that by x-ray. X-ray evidence is nearly always present, especially in those cases which have run considerable fever, but positive reports may be misleading and may vary to a not inconsiderable extent. Miliary tuberculosis, tuberculous infiltration, fungus infection, malignancy, and other forms of radiologic pulmonary findings have been erroneously reported, as well as the "typical" pneumonitis usually seen in one or both bases. Conversely, and fortunately, such conditions are more uncommonly reported as virus pneumonia. Jensen[1] has elaborated upon this latter possibility.

Recovery from the acute infection can be expected in from 12 to 20 days as an average. By recovery is meant subjective improvement in the patient, diminution in cough, return of the temperature to normal usually by lysis, and some improvement of the x-ray findings of the lungs. Convalescence is prolonged. In a study of atypical pneumonia among college students Contratto[2] found the average hospital stay to be 10 days, and the average time of disability 21 days. In addition, he called attention to the weight loss of from 10 to 20 pounds. Weight loss may exceed 40 pounds, however, and weakness can persist for weeks.

In the areas of lung infection, there is present a marked thickened exudate, and the underlying bronchial membrane shows a hemorrhagic state. The pathologic picture has been characterized as one

*Read before the Norfolk County Medical Society, November 18, 1946.

of interstitial pneumonia and purulent bronchitis[3].

The presence of virus infection of the chest should be considered, however briefly, in any positive radiogram. The ability of virus infection to establish radiologic evidence may confuse rather than clarify the picture in a patient past the 4th decade. In such individuals, the temperature curve is occasionally lower and more prolonged and may persist for an extensive period, and chest findings are more frequent in the physical examination. The cardiac patient, compensated on digitalis, may show mild dyspnea and dependent edema from the presence of virus infection. In such cases, the severe cough with little or no production is of great benefit in the differentiation.

An older patient, especially if he has been observed previously in his life for tuberculous infection, may present a confusing picture. In the absence of positive sputum examinations, differentiation would seem to lie chiefly in serial radiographs taken every 10 to 14 days. Such a case is as follows: this 62-year old, white male was admitted on July 27, 1946, with the chief complaints of weakness, dizziness, and loss of appetite. Patient stated weakness and dizziness began about two years before after having been in the Pacific area. He had had operational fatigue. He had three attacks of dizziness and near syncope during this time. Patient stated his loss of appetite had been present for approximately 3 weeks, but he noticed no particular weight loss. Eight years previously, in 1938, he had a lesion in the right apex which necessitated hospitalization for about 10 months. The physical examination revealed an elderly, poorly nourished, fairly well developed, white male, appearing chronically ill. Physical examination was not remarkable except for increase in breath sounds over the right apex. Laboratory examination showed negative urine and blood picture. Examination of feces for blood and ova was negative. Blood serology was negative. Blood sedimentation rate was moderately elevated. Gastric analysis showed normal acid content and no tubercle bacilli. Examination of sputum was negative. X-ray examination of chest on July 28, 1946, showed a questionable lesion involving the right upper lobe. Re-examination on August 2 with stereoscopic films incurred the following report: "Re-examination of the chest with PA stereoscopic films shows a definite infiltrative lesion in the medial portion of the right apex. I can make out no definite cavitation, but I feel that we are dealing with an active inflammatory process which probably is tuberculosis. I would recommend further physical work-up and sputum examination." Further sputum and other examinations were negative. X-ray examination on August 19 resulted in the following report: "Re-examination of the chest and comparison with the films made previously shows almost complete disappearance of the process in the medial portion of the right upper lobe. No other lesions are noted. Impression: The rapid involution of this would make a diagnosis of tuberculosis by x-ray extremely questionable. I feel that the process is atypical bronchopneumonia." Upon discharge, he was advised to get more rest and to have a check-up. This was done at a New Jersey state sanitarium, and he was cleared of tuberculosis. Unfortunately, we have not always been as careful in differentiation. A diagnosis of virus pneumonia must be made by exclusion in such cases if error is to be avoided.

If the patient is seen in a hospital where routine serologic examination is performed, a positive or doubtful report is not uncommon in the presence of virus pneumonia. In a series of 50 virus infections seen in Connecticut in 1943, 4 cases showed positive, and 2 showed doubtful Kahn reactions. This had not been encountered previously by any of our group, and serum on the first instance was forwarded to the Venereal Disease Research Laboratory, Staten Island, New York, for a battery of serologic tests. All tests were reported as 3+ or 4+ with the exception of a negative Mazzinni test. The patient in question denied venereal infection in any form and subsequently was told to report monthly for serologic examinations. At the end of the third month his serology was negative, as were all others following. A titrated Kahn or Eagle determination should be repeated periodically until the presence or absence of syphilis is definite. One case was seen in which a seaman presented himself complaining of a coryza which developed into nothing further. His physical, laboratory, and x-ray examinations were negative, with the exception of a positive Kahn reaction. It is interesting to note that his serology reversed in six weeks. In this hospital in the past four months, three serologic false positive reactions have been seen.

In a personal communication, Mahoney[4] stated that "The strain in the virus encountered along the Eastern Seaboard appears to be different from the

strain encountered in the other parts of the country. At least, there appears to be a larger number of false positive reactions produced in this section than in any other section of the United States. This is an impression, however, and I doubt if it could be substantiated by actual figures."

The presence of a bird virus should be considered in the presence of atypical virus infection of the chest. In reporting the first case of psittacosis in Iowa, Laubscher and others[5] directed attention to psittacosis as an etiological factor in cases of atypical pneumonia. For practical purposes, it would appear that a history of association with psittacine birds would be of help in such cases. Levinson, Gibbs, and Beardwood confirmed their suspicions of ornithosis in six cases of sporadic atypical pneumonia by means of complement fixation tests[6]. Further study of bird viruses might be of benefit in establishing the etiology of virus pneumonia.

The treatment is essentially symptomatic[7]. Penicillin or a sulfa drug should be used in adequate dosage where the presence of secondary infection is established or even suspected. The routine use of these drugs in virus pneumonia, as such, is not justified because no beneficial effect upon the course of the disease is obtained. Due to the hazards of sulfa medication, penicillin is the drug of choice. To obtain rest, control of the severe cough is necessary. In the acute stage frequent doses of brown mixture with ammonium chloride has been found to be of real benefit in thinning the exudate and relieving the tightness. Perhaps ammonium chloride alone would be as beneficial. If a narcotic, such as codeine, is used, double the usual dosage must usually be employed if the cough is to be sufficiently controlled to allow rest. An expectorant is more rational, however, and ultimately of more benefit than is a narcotic; in those cases in which cough is not a prominent feature, resolution may be prolonged. Diathermy or infra-red heat to the chest in 10-minute periods 2 or 3 times a day is of benefit in the convalescent stage. In the apprehensive patient with a sensitive cough reflex, the sedative effect of heat makes it even more beneficial.

Following return of the temperature to normal and improvement of symptoms, prolonged rest is necessary in most cases. From repeated experience with recurrences, we have learned that the patient should spend at least one day in convalescence for every day in bed. This is a minimum. He should be thoroughly well before he is returned to work.

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Medical Society of Virginia Cancer Committee

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Room 383, Medical School Building, University, Virginia

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September 1, 1947

Bone Cancer

The problem of cancers which, in their early stage, are not accessible to palpation, direct inspection, or inspection through simple scopes is admittedly disheartening. Yet when we analyze any one group, we usually find several points, attention to which promises improvement in present poor results.

The most common primary bone cancers are osteogenic sarcomas, chondrosarcomas, fibrosarcomas, and Ewing's tumors or endothelial myelomas. Most of them develop in the age group between fifteen and thirty-five. No part of the skeleton is immune, but the distal portions of the long bones are the most frequent site. Ewing's tumors can be counted on to appear at unexpected locations.

Bone cancers, fortunately rare, pose at best an extremely difficult problem in early diagnosis. Yet without early diagnosis, even worthwhile palliation can often not be accomplished.

The average interval between appearance of the first symptom of primary bone cancer and institution of surgical or radiologic treatment is from ten to twelve months. Only by shortening this interval can mortality be reduced. The interval can be shortened by careful attention to *the one symptom that usually occurs early in the development of a bone sarcoma - pain.*

In the early stage of a slowly growing tumor, moderately severe pain is usually the only symptom. There may be just a feeling of "something wrong." Sometimes pressure on the part does not produce pain but use of the part does. The discomfort may be constant or intermittent, and is sometimes dismissed as "growing pains" of childhood. Incidentally, the term "growing pains" should be deleted from the medical vocabulary. Trauma excepted, bone and joint pain in childhood is almost invariably due to one of three diseases, rheumatism, bone tumor, or osteomylitis, all three of which require prompt, vigorous treatment.

When, as is less frequently the case, the tumor is a rapidly growing one, the pain is often intense, cyanosis and venous dilatation are seen in the overlying skin, and a systemic reaction, manifested by fever, takes place.

Most striking is the frequent coincidence of trauma and subsequent discovery of a bone cancer. That there is any causal relation between trauma and the origin of the cancer is now generally discredited, but most bone tumor patients volunteer the information that an injury marked the beginning of their trouble.

Early diagnosis depends on prompt investigation of bone pain which persists more than a week. A history of recent trauma must not be accepted as an explanation but must be recognized as an added danger signal.

A painstaking physical examination should be followed immediately by an *x-ray consultation.* The changes in bone or periosteum may be so slight that they would not be discovered in a routine x-ray examination, whereas, if attention is focused on a clinically predetermined area the pathologic process may be discovered. The radiologist must be consulted as a clinician, interested in the investigation of disease by a special method, not as a photographer of the human body. To demonstrate an early bone tumor, he must frequently obtain views of the area under suspicion in multiple planes, make plates of corresponding bones for comparison, and also x-ray other parts of the skeleton. In addition, when his initial results are suspicious but inconclusive, he must do repeated examinations.

The next step is *surgical consultation to decide on the advisability of biopsy.* Since it is difficult to obtain diagnostic material by biopsy, even multiple biopsies, from a bone tumor, the radiologist, surgeon, and pathologist must consult together to determine the site or sites of biopsy. Because of the limited value of bone biopsies for diagnosis of early cancers, the roentgen studies must often form the basis for decision as to treatment. In general, Ewing's tumors are treated by radiation, the osteogenic, chondro-, and fibrosarcomas by amputation.

Only by close collaboration between clinician, radiologist, surgeon and pathologist can the best results be achieved.

INVESTIGATE IMMEDIATELY AND FULLY BONE PAIN OF MORE THAN A WEEK'S DURATION, EVEN IF INITIATED BY TRAUMA.

THE FATE OF THE CANCER PATIENT IS IN THE HANDS OF THE FIRST PHYSICIAN HE SEES.

WATER BALANCE*

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In a discussion of any topic as broad as water balance, it is difficult to obtain a comprehensive view of the entire subject. With that fact in mind, this discussion will be systematically presented as (1) a brief outline of the sources of water intake and the methods of water output; (2) a description of the chemical makeup and anatomical division of body fluids; (3) forces that vary fluid volumes; (4) application of these principles to intravenous fluid therapy.

The fluid of the body is replenished in two ways: (1) by the intake of liquids or moist foods; (2) by water formed from the metabolism of ingested food or body tissues themselves. Collar and Maddock[1] give 2500 cc. as the normal water intake in the healthy adult, dividing this into 1200 cc. of water as such, and 1300 cc. derived from metabolism of ingested food or body tissues. In the event that adequate food or drink is not ingested, the body materials themselves are called upon for utilization, with glycogen, protein, and fat being the important sources of water.

Water is lost from the body in the urine, feces, saliva, and evaporation from the skin and lungs. Best and Taylor[2] give the following figures for water output: urine 1500 cc., feces 150 cc., skin 500 cc., lungs 350 cc., for a total of 2500 cc. in a healthy adult. One is impressed by the very accurate adjustment between available water and excreted water. At first glance such adjustment would seem to be too perfect, but this is precisely what happens, generally not for one single day but day after day. The almost constant body weight of certain individuals for months or years is similarly remarkable when we consider the ingestion, secretion, and excretion of the many kilograms of material that occur daily.

From the viewpoint of water and electrolyte balances, Darrow[3] states that the chemical anatomy can be described in terms of three tissues. The first of these is bone, which contains almost all of the body calcium, extracellular phosphorus, and almost 33% of the total body sodium in adults. Since this sodium is bound up in the calcified bone matrix, it is available for body use only when extreme degrees of decalcification occur. Since significant fluctuations in the amount of bone calcium are not likely to occur in the short period of time when we are concerned with problems of fluid balance, we shall not concern ourselves with this relatively negligible effect.

The second category of tissues makes up the extracellular fluids, of which blood plasma is a good example. Other examples of such fluid are spinal fluid, gastric juice, bile, pancreatic juice, and sweat. In general, the electrolyte concentration of all these fluids is similar, but by no means identical; they all contain large amounts of bicarbonate with the pancreatic juice containing the largest of this ion. Altogether, extracellular fluids make up about 20% of the body weight in adults. As shall be elaborated later, maintenance of the integrity of extracellular fluids depends to a great extent on the concentration of the sodium and chloride ions. It is obvious that extracellular fluids may increase or decrease in volume, as in edema or dehydration, or they may show an increase or decrease in electrolyte concentration, as in alkalosis or acidosis. Some mention will be made later of the effect of these changes on the total body electrolyte balance, as well as the body as a whole.

The third category of body fluids is made up of the intracellular fluids, characterized largely by skeletal muscle and also by cardiac muscle, brain, and liver. Here, again, electrolyte concentration of these tissues is similar in most respects, but by no means identical. The characteristic feature is a high concentration of potassium, phosphorus, and magnesium ions, and low concentration of sodium and chloride ions. The amount of intracellular water is chiefly dependent on the potassium ion within the cell, although some effect is obtained from the concentration of the extracellular sodium.

Forces that alter the volume of extracellular and intracellular fluid are many and varied. It is well at first to point out some of these forces and their effects, and then to describe some of the clinical states associated with such changes. Smith and

*Read before the Norfolk County Medical Society, November 18, 1946.

Mendel[4] in 1920 showed that within a few minutes after intravenous injection of quantities of glucose or saline solutions equal to the total blood volume of the experimental animal, the blood volume had returned to practically normal, and there was no gross evidence of fluid accumulation. Water taken in through the gastro-intestinal tract is handled in much the same way and stored in the interstitial spaces. With the introduction of fluid into the blood stream, the hydrostatic pressure is increased and the colloidal osmotic pressure undergoes a decrease; this accelerates the flow of fluids from the capillaries into the interstitial spaces. Conversely, processes conducive to dehydration and hemo-concentration detract from the volume of extracellular fluid.

Changes of hydrogen ion concentration in the body fluids also contribute to changes in the volume and distribution of such fluids. This contention has been supported chiefly by the work of Van Slyke[5]. He has shown that when an acid is added to a biological medium containing protein, the acid anion combines with base from the dissociated acid salt. Such a substance increases greatly the osmotic pressure of the cells over the interstitial fluid since they, the cells, contain more protein. This consequently results in an intracellular water shift. Alkalinization causes the reverse process to occur, producing an extracellular water shift.

Cellular membranes within the body seem to be generally permeable to water, hydrogen, glucose, and ammonia, but to few other solutes. As shall be pointed out later, it has been demonstrated that sodium and potassium may at times cross cell membranes, but do not under ordinary circumstances. Solutes that pass uniformly and freely through cell membranes contribute to the total osmotic pressure of all media, but have a negligible effect on the water shifts. The fact that cells can transform glucose into glycogen enables them to store large quantities of such material in the form of large molecular structures which exert minimal osmotic pressure effect. Lipoids also are virtually osmotically inert, because of their insolubility. Protein complexes would share the same position if they were not able to freely and readily combine with other substances as discussed above (Peters)[6].

Of chief concern in internal water exchange is the concentration and distribution of electrolytes. Earlier ideas about the distribution of electrolytes have had as their basis the assumption that cell membranes are for all practical purposes impermeable to cations. Darrow[3] points out, however, that such is not the case, and he further states that it has been demonstrated that both sodium and potassium may cross cell membranes (this fact had been demonstrated in experimental hemorrhage, shock, and in anoxia). It remains a fact that many phenomena can be best described by assuming that adjustments to changing sodium concentrations in extracellular fluids are brought about by shifts in water, rather than shifts in electrolytes themselves.

As stated previously, changes in concentration of serum sodium are a definite and most important factor in the distribution of body fluids. Increases in serum sodium lead to an extracellular shift of water in an effort to increase the concentration of intracellular potassium; conversely, decreases in serum sodium concentration lead to an intracellular water shift in an effort to decrease intracellular potassium concentration. Both of these phenomena go on until a stage of equilibrium has been obtained. The process is the same as the swelling and shrinking, respectively, of erythrocytes in hypotonic and hypertonic salt solutions.

Various forces that alter the volume of extracellular and intracellular fluids have been discussed. Among these are intracapillary hydrostatic pressure and colloid osmotic pressure, hydrogen ion concentrations of body fluids, and the distribution and concentration of the electrolytes. It is felt by many observers (Darrow)[3] that this latter factor is the most important of all from both a physiological and a clinical viewpoint. It is felt that the volume of extracellular and intracellular fluids depend chiefly on concentrations of sodium and potassium, respectively, in those fluids.

When the output of water exceeds the intake from any cause, the body is said to be in a negative water balance, and a state of dehydration results. Dehydration may result from a number of causes: first, simple deprivation of fluids; second, excessive loss of water as in excessive and persistent vomiting (pyloric or intestinal obstruction), prolonged diarrhea, abnormal diuresis, and excessive sweating; third, injection of hypertonic sugar or salt solution into the blood stream with production of a rise in osmotic pressure of the blood which causes a flow of fluid from the tissues into the vascular system, increasing the blood volume which soon returns to

normal through loss of fluid back into the tissues and later excretion by way of the kidneys, and results in the loss of body water or dehydration; and fourth, and undoubtedly the most important factor involved in dehydration, the reduction of the total concentration of electrolytes in the body fluids. Darrow[3] points out that the most important fact to remember is that the central feature of clinical dehydration is practically always a deficit of electrolyte, particularly extracellular electrolyte, and associated with this may or may not be net deficit of body water. The electrolyte concentration of body fluids is maintained constant by elimination or retention of water, or, stated another way, a decrease or increase in the total electrolytes which are comprised of sodium and potassium (basic radicals) and bicarbonate and chloride (acid radicals) is accompanied by corresponding decrease or increase in the volume of body water. As Grasscup[7] points out, the total of basic ions (sodium, potassium, calcium, and magnesium) must equal the total of acidic ions (chloride, bicarbonate, phosphorus, proteinate, organic acids), but the basic constituents are much more important because deficiences of these ions must be replaced in the diet. On the other hand, deficiences of the acidic ions (e.g., chloride or bicarbonate) are temporarily relieved by a reciprocal rise in concentration of other acidic ions. The total concentration of electrolytes in body fluids is therefore dependent on the total fixed base. When excessive amounts of chloride ions are lost, as in pyloric or high intestinal obstruction with persistent vomiting, a reduction of blood chloride occurs. Such a loss of chloride at first causes no ill effects, normal electrolyte concentrations being maintained by a rise in plasma bicarbonate due to retention of carbon dioxide and an extracellular shift of bicarbonate ion. If, however, such a chloride loss is not replaced, or if it continues, alkalosis will result with increased excretion of the base in the urine, resulting in diuresis and further dehydration. On the other hand, the continued loss of basic radicals (sodium) due to diarrhea, intubation, or external fistula, leads to an immediate depletion of base which cannot be buffered by a reciprocal rise of another basic ion, as is the case with acid radicals. The first response to this reduction in base is a reduction of plasma bicarbonate by an intracellular shift of bicarbonate and the removal of larger amounts of carbon dioxide through the lungs. There then follows an excretion of excess acid radicals in the urine, again resulting in a loss of water.

That the kidneys play a definite role in maintenance of normal electrolyte concentration as illustrated in clinical dehydration is well discussed by Abbot[8]. He points out that when dehydration is mild, the body gives up water to the kidneys in an attempt to maintain a normal electrolyte pattern, but should the state of dehydration become more marked, the water can no longer be spared in amounts sufficient for the formation of urine. There results a marked distortion of the blood chemical picture with resulting changes in the normal electrolyte picture. It is at this stage of marked dehydration that there is insufficient urine output to take care of the excretion of nitrogenous waste products and, as a result, there is a rise in non-protein nitrogen readings. It has been emphasized by many observers (Marriott)[9] that if such alterations in kidney function as just described were allowed to remain very long, irreparable kidney damage might occur. Frequently the urine contains albumin, casts, and cells, and after rehydration, the kidneys are frequently unable to concentrate urine in normal fashion.

The mechanism of certain other symptoms of dehydration are not clear, but a practical point that needs emphasis is the fact that conditions producing loss of water and electrolytes also tend to cause a loss of plasma proteins with resultant shock. It is for this reason that patients suffering from severe and marked dehydration should be given whole blood as well as salt solution.

Edema is an excessive accumulation of fluid in extracellular spaces. It may be manifest, occult, or latent. It may be local or general, and part of a systemic disturbance. As stated previously, extracellular fluid is formed by filtration under pressure at the arteriolar end of the capillaries. As the hydrostatic pressure falls toward the venous end, the colloid osmotic pressure of plasma proteins draws fluid back into the vascular system, under the effect of opposing hydrostatic and colloid osmotic pressure. The energy for this movement comes partly from the pumping action of muscles, and partly from the pulsation of arteries and arterioles. Edema may arise whenever a failure in fluid movement causes more to be filtered out of the vascular system than is absorbed. It may result from wide arteriolar dilatation with increase in intracapillary hydrostatic

pressure, hypoproteinemia with decrease in colloidal osmotic pressure, increase in venous pressure with increased hydrostatic pressure at the venous end of the capillary, or obstruction of lymphatic channels. Apart from hypoproteinemia, mechanical failure of fluid movement is only very rarely seen, and then as a terminal cause of generalized edema. Rather, the cause for generalized non-hypoproteinemia edema must be sought in the operation of controls of extracellular fluid volume. Actually the problem in this type of edema resolves itself into one of simultaneous water and sodium ion retention. Regardless of which factor predominates, edema develops; of the two components, water is much more easily retained. Sodium retention and edema can result only from impaired sodium excretion. Since the principal site of sodium excretion is the kidney, sodium retention is therefore associated with functional or structural disturbance of renal function. In either case, restriction of dietary sodium below the minimal level of sodium excretion must ultimately result in loss of water and salt, and therefore in correction of edema (Carcaran)[10].

As a conclusion, it is well to briefly mention the fluids available for intravenous use, their indication, and chief values[11]. The first is whole blood. For hemorrhage it is specific and curative; for shock with peripheral circulatory failure, it is one of the best forms of therapy; when loss of protein occurs, as in large purulent wounds, massive burns, or following prolonged diuresis with washing out of native proteins, blood transfusion is the ideal therapeutic agent.

The second is acacia solution. It has one advantage over crystalloid fluids in that its larger molecular size prevents its diffusion into interstitial spaces. In shock, experimental evidence has revealed that it produces a more lasting elevation of blood pressure than either normal saline or Ringer's solution. However, the possibility of certain renal complications that have been reported have caused many observers to become doubtful of its value.

The third is glucose, given as a 5% solution. It has ideal qualifications in the presence of ketosis from any cause, or in cases of moderate, but persistent vomiting or diarrhea. It may be used intravenously in that strength which is isotonic with plasma in order to introduce the effect of distilled water and evoke a diuresis.

The fourth is saline solution. Salt, in 0.85 or 0.4% solution, may be used in cases of alkalosis or acidosis provided there is adequate kidney function. The physiological saline solution is quite beneficial, when used with 5% glucose, in cases of moderate dehydration without signs of acidosis or alkalosis. Saline solutions of 5 to 10% find their greatest usefulness in water intoxication, i.e., the retention of water without salt, probably due to a derangement of the tubular reabsorption mechanism controlled by the anterior pituitary hormone. In circulatory failure of either central or peripheral origin in the advanced age group, and in the presence of obvious kidney damage, the quantity of sodium chloride must be carefully followed if complications are to be avoided.

The fifth is Ringer's solution. It is to be used for the same indications mentioned for physiological saline. It has the added advantage of supplying the other cations, calcium and potassium, in the same concentration found in normal plasma.

The sixth is Hartman's solution. It is a slightly diluted Ringer's solution, plus sodium lactate. The dilution makes it hypotonic to plasma and so evokes a swifter diuresis. The chief advantage of this preparation is the fact that it furnishes an alkalinizing salt, immediately available for neutralization.

The seventh is water itself. Its most important function is the supply of the medium in which the kidney can perform its function as the controlling mechanism in the maintenance of the acid-base balance. For this purpose it is irreplaceable. It also may be used to release edema due to salt retention. However, it should not be used to replace lost tissue or plasma fluids, since the body normally cannot retain water without salt. Distilled water as such should not be given intravenously since it may take the red cells in contact with it. It may be given with 5% glucose; the glucose is metabolized and the distilled water left behind.

The eighth is concentrated glucose or sucrose (50% solution). The use of concentrated solution for purposes of dehydration in acute cerebral trauma had its origin in 1919. States of water retention manifested in areas other than the cranial cavity are equally amenable to dehydration. The physiological mechanism consists of the withdrawal of extracellular fluid into the vascular bed by the increased osmotic tension exerted by the concentrated solution. This is carried to the kidneys and excreted. Sucrose is preferable since it is a non-

metabolizable sugar when injected intravenously, is of large molecular structure, does not diffuse out of the vascular system, and is quantitatively excreted by the kidney.

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Penicillin for Eyes of Newborn.

A Memphis, Tenn., physician points out that penicillin is superior to silver nitrate in preventing the development of inflammation in the eyes of newborn infants.

Writing in the August 9 issue of *The Journal of the American Medical Association*, H. Charles Franklin, M.D., from the Department of Obstetrics and Gynecology, the University of Tennessee College of Medicine, presents a comparative study of 1,710 infants, 961 of whom were given penicillin and 749 silver nitrate.

Twenty (2.1 per cent) of 961 infants exhibited pus in one or both eyes during or after receiving penicillin drops and 45 (6.0 per cent) of 749 exhibited pus after silver nitrate.

Abnormalities other than the presence of pus were noted in each group, states Dr. Franklin. Swelling of the eyelids was noted in 31 per cent of infants after penicillin application and in 58 per cent after silver nitrate. Redness of the delicate lining of the eyelids was seen in 42 per cent after penicillin and in 72 per cent after silver nitrate. Watery discharge was least frequent and occurred in two per cent after pencillin and in 10 per cent after silver nitrate.

Although the silver nitrate drop method is the most popular today, the physician points out that "silver nitrate is irritating to the extent of pus formation is confirmed by the fact that a high percentage of infants in the group receiving silver nitrate prophylaxis exhibited pus on the day of birth and the first day of life. Likewise a high percentage of those infants exhibiting other abnormalities at this time was probably due to this irritation." The author adds that "instances are recorded of infants being made blind by the use of a solution too high in concentration."

The author feels that the foregoing facts suggest that penicillin is in several respects superior to silver nitrate. "Penicillin in proper concentration is nonirritating," he states, "nonpainful, nondestructive and effective in the treatment of ophthalmia neonatorum [inflammation of the eyes in the newborn]."

COMPLICATED SURGERY OF THE ABDOMEN WITH REFERENCE TO ANESTHESIA, DRAINAGE, PRE- AND POST-OPERATIVE CARE—WITH CASE REPORTS*

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In the outset I wish to thank the Programme Committee for the privilege of presenting this paper to our Society. The cases herein reported embrace only those having peritonitis of more than a regional scope, all of which were drained. It should be specifically mentioned that this series, consisting of 267 cases, were exceptionally ill patients. Our records show a mortality of 1.8 percent—that is a total of five cases.

In the more complicated cases—that is those who were seriously ill—it pays to make haste slowly. It is often the case that pre-operative supportive treatments are in keeping with the best interest of the patient, rather than immediate surgical intervention. For instance, intravenous glucose given with a sufficient amount of insulin to prevent even a transient increase in the blood sugar is always advantageous.

Patients frequently came into our hospitals with an acute abdomen (more especially during the War period, when there was a scarcity of civilian physicians) and in instances it was scarcely possible to make a conclusive diagnosis, regardless of the fact you can usually bet the appendix against the field. An immediate operation will not correct an already existing peritonitis; therefore, under pre-operative measures of a supportive nature, they usually become more favorable surgical risks, with a lesser tendency to bring surgery into disrepute. Furthermore, and more to the point, they have probably been vomiting and, as a result of lack of food intake, have developed acidosis with acetone and diacetic acid present in the urine. All such cases should be given glucose prior to operation.

In addition to a careful physical examination, complete laboratory investigations, including the Schilling blood count, reveal important complications that serve as a basis for the determination of the necessity of immediate surgical intervention or the deferment of same.

The selection of an anesthetic is an all important problem, whether it be drop ether, gas-oxygen and spray ether, sodium pentothal, spinal anesthesia, or what not, the latter serving remarkably well by producing excellent muscular relaxation; however, it is not adaptable in all cases, being contraindicated in respiratory and other conditions with which you are no doubt familiar. Due consideration must be given to body weight, not to the actual weight but to the ideal weight based upon heighth. Obese subjects, according to the literature, are poor subjects for spinal anesthesia, and it is from this anesthetic that fatality is most likely to result. Lower abdominal operations can be done painlessly under small dosage. In our hospital we have been using metycaine and thus far have not had a fatality from its use. A patient with a normal weight of 150 pounds should tolerate 150 milligrams, but can be operated on under 100 milligrams or less. Metycaine being lighter than spinal fluid, makes it important that patient be placed in the Trendelenburg position immediately after the spinal injection has been made and a careful check should be maintained on the blood pressure. By using small dosage we seldom encounter shock, nausea or a marked drop in the blood pressure, in which event it is readily restored by coramine, adrenalin chloride or obstetrical pituitrin.

Surgeons differ in their opinion regarding the choice of anesthetics and I have no argument to offer in that regard, for these problems are left largely to the judgment of the internist and anesthetist.

Drainage: We no longer resort to hard rubber tubing or glass, but rely on rubber tissue, which serves a useful purpose and is less likely to be complicated by secondary abscess or post-operative hernia.

It has long been known that in severe cases of peritonitis a reverse order of peristalsis establishes itself, as manifested by vomiting of cane juice fluid, a product of peritonitis, and, unless this is given prompt and proper consideration, these patients

*Read before the annual meeting of the Medical Society of Virginia, at Virginia Beach, October 14-16, 1946.

literally drown in their own secretion, therefore, the importance of suction drainage by means of the Wangensteen or similar apparatus, in conjunction with withholding food orally and providing intravenous nutrition, at the same time bearing in mind the importance of the modified Fowler position.

It is not my intention to discuss surgical technique; however, during the operative procedure in this type of cases, purulent fluids are evacuated from the intestinal coils, from the lumbar gutters and pelvis, preferably with a motor driven suction machine.

In peritonitis resulting from a ruptured appendix it is best to remove the appendix, if it is accessibly located, however, this is another of our problems, for, according to the best of my knowledge and belief, it is unwise to make deep explorations throughout a septic abdomen. In this connection, it is proper to quote a noted deceased surgeon, who had done more than 25,000 appendectomies, when asked: "Doctor what is the most simple major operation you ever did?" His reply was: "Well, I guess an appendix." He was then asked as to the most difficult operation within his experience and his instant reply was "Undoubtedly, an appendix." Summing up, I would say that much depends upon your good judgment, in various cases, as to the advisability of removing the appendix or not. Certain factors merit consideration, such as the severity of the illness; how is the patient doing under the anesthetic, and is the chance for recovery inhanced by drainage and removing the appendix at a subsequent time—after infection has subsided?

Prior to closing the incision, it is routine to dust the abdomen with sulfanilamide crystals. The Penrose drain is ordinarily removed on the third post-operative day; however, this depends upon the amount and character of the pus in conjunction with the infection with which we are dealing.

Post-operatively, these patients are sustained by giving daily, or twice daily, intravenous glucose with insulin in sufficient amount to prevent excess blood sugar. Suction is continued so long as vomiting persists or the stomach remains distended with fluids. Enemas, as a rule, are deferred in these cases by reason of paresis of the intestinal musculature, with cases bordering on paralytic ileus. A colon tube, well inserted, used with pitressin, usually relieves gaseous distention. Post-operative sedatives consist largely of pantopon, which is less deleterious than morphia and a suitable diet is resumed when indicated.

CASE REPORTS.

In order to conserve time, only four of 276 cases are reported.

Hospital Record No. 10,107: Patient was a 65 year old man, who had previously had a posterior gastro enterostomy in this Clinic and who, incidentally, was a diabetic. His original operation was on July 4, 1945. His recovery was uneventful. He was readmitted as an emergency at night on July 15, 1946, at which time he complained of acute abdominal pain with vomiting, temp. 102, tachycardia, leukocytosis, plus the usual findings of an acute abdomen, with a blood sugar of 200 milligrams per 100 c.c. of blood. He was operated on that night by Dr. J. M. Rogers of our Surgical Staff. The appendix was gangrenous and ruptured and was removed. Under appropriate treatment he made a satisfactory recovery and was discharged August 10, 1946.

Hospital Record, No. 10,649: This case is reported because it is rather unique. The history is briefly summarized as follows: Patient was a 71 year old man who had previously been hospitalized in a well standardized hospital in West Virginia, where he had remained for a considerable time. He had had an exploratory laparotomy and was then found to have a sub-phrenic abscess with partial gangrene of the gall bladder. The original lengthy incision, high right rectus, was closed and a lateral stab drain applied. Drainage continued for about five weeks, healing and reopening automatically. He was subsequently discharged from the hospital and returned to his home. He was admitted to Lee Memorial Hospital on the late afternoon of January 17, 1946, appearing desperately ill, with axillary temp. 104, pulse 138, in conjunction with much cardiac disturbance and persistent vomiting for 48 hours.

Laboratory reports were: W.B.C., 37,350; polys 98 per cent; immature cells 38 per cent. His urine showed acetone and diacetic acid, each 4 plus. He was definitely jaundiced, with a hugely distended sore abdomen with a flat percussion note.

Immediate Treatment: Intravenous, glucose, 1,000 c.c. 10 per cent, with insulin units, xx; penicillin, 60,000 units intra-muscularly, plus 40,000 units intra-venously with glucose.

During the night he stopped vomiting and his nurse reported that he rested, reasonably well. His A. M. temp. was 97.2; pulse 80 per minute, intravenous glucose, penicillin and insulin were repeated that morning, and laparotomy done early that afternoon—January 18. 1946, under sodium pentothal grains xv.

Operative Findings: A large amount of free pus within the peritoneal cavity in conjunction with a tensely-distended sub-phrenic abscess. Free pus was removed with suction machine and deeper abscess incised and drained of 600 c. c. of offensive smelling pus. Sulfanilamide was instilled into the abdomen and the wound drained with rubber tissue. Specimen of pus sent to Laboratory. Smears and cultures positive for streptococcus and colon bacillus. Penicillin was continued in maximum dosage and, as soon as streptomycin could be obtained, which was 8 days later, this was added to the treatment, giving 100,000 units every 3 hours. These drugs were continued for ten days, at the end of which time streptococcus was negative; however, colon bacillus was present, as revealed by both cultures and smears. Along about this time the Squibb's Research Laboratory reported that this type of colon bug was highly resistant to streptomycin, even in high concentration. He was then put on sulfathiazole orally and shortly thereafter drainage ceased and the sinus healed. On February 25, 1946, he was discharged in satisfactory condition. Our follow-up record indicates that he has gained 50 pounds in weight and is feeling normal in all respects.

Hospital Record No. 12,401: Patient—Miss P. B.— was a middle aged single lady, who was a member of the legal profession and pretty smart and did not reveal her age. She was admitted on August 18, 1946, complaining of severe abdominal pain of 24 hours duration, with persistent vomiting. Her temperature was 101.8; pulse 120, and her general examination was good—that is, there were no headaches, ear or mastoid disease and no goiter. Her circulatory, respiratory, genito-urinary and female generative organs were normal; however, there was marked abdominal distention with generalized soreness.

Laboratory Reports: W.B.C. 27,850; polys 97 per cent; immature cells 58 per cent.

Following admission we operated on her pretty promptly under gas-oxygen and spray ether.

The operative diagnosis was gangrenous perforative appendicitis with peritonitis and massive intestinal adhesions. The appendix was located in the left abdomen and was not removed. There was an abundance of thin purulent fluid within the abdomen and pelvis. The cavity was dusted with sulfanilamide crystals and the incision closed with a Penrose drain inserted deep in the pelvis. She made a satisfactory convalescence and was discharged on September 18, 1946.

Hospital Record No. 13,531: Patient was an 8 year old girl, admitted December 24, 1946, with abdominal pain and vomiting of more than two days duration. General examination, including laboratory investigations, indicated that she was severely sick. She had temperature elevation; W.B.C. 16,000 polys 90 per cent; immature cells 60 per cent, and in addition, presented typical symptoms of a severe peritonitis, with acetone and diacetic acid, 4 plus. Unfortunately, her mother had given her castor oil 24 hours previously, which intensified her pain. She was immediately given intravenous glucose, 500 c.c. 10 per cent, with insulin, units, x, and operated under ether anesthesia. Fortunately we were able to remove a gangrenous perforated appendix. Pus from the wound was positive for streptococcus; therefore, she was put on maximum doses of penicillin; given intravenous glucose with the proper amount of insulin, and nothing by mouth. Wangensteen suction was continued off and on for several days. Our pathologist, Dr. J. Hamilton Scherer, of Richmond, reported "Acute gangrenous appendicitis." It was necessary to maintain her periodically under the oxygen tent. She made a satisfactory recovery and was discharged January 18, 1947.

Lee Memorial Hospital.

DISCUSSION

DR. J. COLEMAN MOTLEY, Abingdon: I think after about forty years of work in the operating room most of us learn certain things by experience, and if experience has not taught us anything in that length of time it is quite obvious that we selected the wrong vocation some forty years before. I have often thought that if general practitioners who have been in practice for some four or five decades would get up when a paper of this sort is read and just tell what their experience has taught them it would be very informative and very helpful to some of the younger men.

I quite agree with Dr. Wright that the pre-operative treatment and the treatment while the operation is going

on and the post-operative care and surgical judgment as to when to operate are extremely important. I want to say just a word or two in discussing the operation itself, and my experience in the operating room has taught me that there are about five fairly essential things that go to make an abdominal operation safe for the patient.

In the first place, I think we should make a fairly accurate pre-operative diagnosis, so that we may design our incision so it will expose the organ on which we are going to operate. By that I mean, if a man has a ruptured spleen we should not try to operate on him through a low mid-line incision, and if he has a perforated ulcer we should not try to operate on him through a McBurney incision. I did that myself, and it did not work so well.

The second thing is to provide proper and adequate anesthesia, and particularly anesthesia that will give you complete abdominal relaxation.

The third thing is extremely gentle handling of the tissues. Do not shove and cuff the intestines around with metal retractors, because rough handling causes surgical shock and causes post-operative adhesions. That is tied in closely with number two—adequate anesthesia to give proper relaxation.

The fourth thing is perfect hemostasis. Leave a dry field when you are through operating.

The fifth thing is to limit the time of the operation to the safety limits of the patient who is being operated on. Sometimes we have to operate in cases of gastric resections or abdomino-perineal operations for cancer of the rectum that take more than an hour, but in the ordinary routine case we ought to do the operation and get the patient off the table in an hour. We sometimes have a hysterectomy and feel in the upper abdomen and find that the patient has a lot of gall-stones and are tempted to get the gall-stones out. But if you have used up the hour and used up the patient's stamina you had better let her keep her gall-stones for the time being.

So, to sum up, use a properly designed incision for the operation that is to be done, use proper and adequate anesthesia, handle the tissues gently, leave a dry field, and complete the operation within the time limit that is quite safe for the patient.

DR. A. M. SHOWALTER, Christiansburg: There are just a few things I should like to say about Dr. Wright's most enlightening paper. The first is a series of questions which in his discussion I should like for him to answer for my enlightenment.

Dr. Wright refers to the use of sulfanilamide inside the peritoneal cavity. First, I should like him to tell us just how much he uses and if he uses it dry. Or does he use any water with the powder, for more general distribution?

The second question, Dr. Wright, is whether or not you use pencillin regionally in your infected abdominal incisions. Third, do you use penicillin or sodium sulfathiazole or drugs of that type either intravenously or intramuscularly routinely in these infected cases? Those are the three questions.

The only comment I should like to make here is that it is my opinion, based on experience in the last year or so, that 5,000 or 10,000 units of penicillin used in the abdominal wounds, injected in the tissues with a needle, preferably after closing the skin, or a flushing out of the subcuticular tissues after the wound is tightly closed, will do more good in your infected cases than probably 1,000,000 units used intravenously or subcutaneously following your surgery. Recently I have had the pleasure of seeing the majority of my infected drainage appendix cases go out of the hospital in a week with clean wounds, after using sulfanilamide in the abdominal cavity and using penicillin in the wound. There has been a lot written about the use of penicillin, and I have been interested to see the results attained by the combined use of sulfanilamide in the peritoneal cavity and 5,000 or 10,000 units in the abdominal wall. The penicillin is dissolved in twenty to forty c.c. of sterile water.

DR. T. J. HUGHES, Roanoke: I think Dr. Wright's paper is a very timely one; and the discussion that has followed demonstrates the fact that in selecting papers to present before a body of this kind we often look for some obscure and complicated new procedure in some little-known disease, instead of selecting a practical subject which will be appreciated by a larger number of people.

There is no criticism which I care to make of Dr. Wright's paper. On the other hand, he is to be commended very highly for bringing to us a paper which is so full of interest and one which we appreciate from past experience.

So far as the anesthetic is concerned, we all have our pet anesthetics, and it has been our custom to try to fit the anesthetic to the patient. If it is going to be a short operation, we use sodium pentothal, or if we want more relaxation we use spinal anesthesia, but if we run against any snags or difficulties of any kind we usually drift back to the old, well-tried anesthesia with ether, or gas and ether.

As for drainage, that is a mooted question as to what kind of drainage or whether to use any drainage at all. Five or six years ago, when it became so popular to use the sulfa drugs in the abdominal cavity, I recall attending a surgical meeting in New York in which practically every surgeon present advocated the use of some form of the sulfa drugs in the peritoneal cavity. At that time it was very popular with a great many men to use just one very large dose of sulfanilamide or sulfathiazole in the peritoneal cavity and close the incision without drainage, and in the last five or six years I have followed that procedure very closely. I do not believe I have inserted a drain in the abdominal cavity a half-dozen times in that many years. I prefer sulfanilamide in the peritoneal cavity because it does not have a tendency to ball up and it is more easily and more readily absorbed. Sulfathiazole, I think it has been demonstrated, is not suitable on account of the fact it is deposited in balls and is not completely dissolved. I believe that the ad-

dition of the penicillin, as suggested by Dr. Showalter, is a good thing—adding that in the incision following the insertion of the sulfanilamide in the peritoneal cavity.

As far as the time to operate is concerned, that is another question which is debatable. In my experience, I have always operated as soon as I could get ready after I had made a diagnosis of appendicitis, whether I thought it would rupture or not. I have had no reason to regret that procedure. As has been said, it is just a question of whether the surgeon thinks the patient is in a suitable condition to stand the operation or whether a delay would improve his condition.

I want to thank Dr. Wright for his excellent paper. I think it gives us all food for thought and consideration.

DR. M. B. HIDEN, Warrenton: The last speaker answered my question in part. What I have in mind is that we are avoiding or skipping the most controversial question and that is early operation *versus* late operation. Nobody has been able to make it perfectly clear to me when to operate early and when to operate late. It is certainly true that we have a positive pressure in the abdomen even in health and when there is present pus and an excess of gas in the abdomen that pressure is increased and pus under pressure is usually very toxic. By all means we should give supportive treatment.

In one of Dr. Wright's cases he gave supportive treatment for five days without operating and this patient was still getting absorption of toxic material from the pus. In a case of this kind I think something should be done to relieve or limit this absorption. After giving glucose, transfusions, etc., I believe a small rubber drain should be inserted, under local anesthesia to relieve at least temporarily the pressure from the pus and to stop to some extent the absorption of toxic material. A patient who is too sick to stand, under local anesthesia a puncture and insertion of a drain is probably too sick to be built up to stand an operation later. Personally I believe in an early operation, but if not an early operation you should, while building up your patient, insert a little novocain in the abdominal wall and put a drain of soft rubber tissue down into the abscess in the abdominal cavity and thereby relieve the patient of a great deal of absorption from the pus.

I should like for Dr. Wright to criticize that.

DR. WRIGHT, closing the discussion: I wish to thank these gentlemen, who have voluntarily participated in the discussion of this paper. They have given us something worth while to think about and I feel the Society as a whole has profited thereby.

In submitting this article the writer realizes that it is incomplete in various respects. Replying to Dr. Showalter regarding the intra-abdominal use of sulfanilamide, I wish to state that we use it intra-peritoneally in the crystalline form and in the medullary cavity of bones in solution, and that we use penicillin in the infected abdominal wall; also sub-cutaneously with gratifying results. I may say further that the dosage of sulfanilamide depends upon the age and weight of the patient, varying from 1.5 to 6 grams. In response to other questions, will say that we have never used sulfathiazole intra-peritoneally, but have used it frequently orally, especially in the presence of the colon bacillus infection, in which infection you cannot over-estimate the value of streptomycin, which we have given in 300,000 units every 3 hours. In abdominal abscesses and abscesses in general, we realize the importance of utilizing the laboratory promptly, for the early determination of the type of infection confronting us is a splendid index as to proper treatment.

Dr. Hiden propounded a very difficult question, "When to operate early and when to operate late?" and one which no surgeon can answer intelligently without first knowing the details regarding the specific condition of individual patients. This may best be explained by referring to *Hospital Record, No. 10,649*, in the instance of the 71-year-old man, and *Record No. 13,531,* an 8-year-old girl who was admitted December 24, 1946, with elevated temperature; vomiting for two days; an intensely sore abdomen, with leukocytosis, and acetone and diacetic acid, each 4 plus. As soon as her examinations were completed she was given intravenous glucose, 500 c.c. 10 per cent, with insulin, units x, which resulted in material improvement. She was operated on within 2 or 3 hours after admission, removing a gangrenous perforated appendix, which appendix, as usual, was sent to our pathologist, Dr. J. Hamilton Scherer, who reported "Acute gangrenous appendicitis". Operation revealed an enormous amount of thin pus and some fecal material within the cavity. She made a complete recovery; however, it was necessary to resort to Wangensteen suction, as well as oxygen and intravenous glucose repeatedly over a period of several days.

In order to conserve time, the writer purposely omitted from this treatise, a very much discussed question of the day, viz., early ambulation, and it was hoped that in as much as this came within the scope of the subject, under the heading of post-operative care, it would be brought out under discussion. The question of early ambulation is of paramount importance, and it seems proper to state that the writer has made considerable investigation through various competent sources and found a diversity of opinion in that connection. At our hospital we are getting the majority of our surgical cases out early and thus far have had no cause for regret.

In a reprint from the Department of Surgery of the Brooklyn Hospital, I find reported 27 cases of disruption of the abdominal wall, which, according to the writers, could not be attributed to faulty surgical technique or defective suture material, not to mention innumerable cases of post-operative hernias. We have done various cases of venous ligation where phlebitis developed, hoping to prevent complicating fatalities, and in consideration of end-results, this operation is advocated.

THE TRENDELENBURG POSTURE IN THE THIRD STAGE OF LABOR*

EDWIN M. RUCKER, M.D.,
Richmond, Virginia.

In all studies of maternal mortality one notes with disquieting regularity the appearance of the three factors of sepsis, toxemia and hemorrhage. Chemotherapy has done much to lower the rate of sepsis, and better prenatal care through education has improved the incidence of toxemia; but hemorrhage remains little changed as a cause of mortality and secondarily as a major contribution to morbidity. There is no more fearsome thing in obstetrics than an unexpected postpartum hemorrhage of serious proportion.

I thought that a brief account of the current ideas concerning the mechanism of the separation of the placenta and the management of the third stage of labor in the light of these ideas might be of interest.

From the historical side it is interesting to note that prior to 1861 delivery of the placenta was effected either by traction on the cord or by passing the hand into the uterus and removing the placenta manually. In 1853 Crede described a technique of immediate expression of the placenta. The technique was a definite advance in the management of the third stage of labor; however, it seems that a similar technique had been in use at the Rotunda Hospital in Dublin for about a century previously and had been described by John Harvie in 1767.

Dohrn and Ahlfeld thought that the immediate expression of the placenta was attended by a greater loss of blood due to the imperfect separation of the placenta. They advocated an attitude of expectancy even though Ahlfeld stated that only 14 per cent of the placentas delivered spontaneously in his series. The ideal lies somewhere between the two.

In 1929 Morris Leff described the delivery of the placenta as occurring in 2 phases; the separation of the placenta which is a normal physiological process and takes place almost immediately after the delivery of the infant, and the delivery of the placenta which in most instances has to be aided by the attendant. He based his ideas on observations of 7500 personally conducted cases in which the separation of the placenta was determined by vaginal examination. It is his idea that the usually described signs of lengthening of the cord, changes in shape and position of the uterus, etc., are in reality not signs of separation but that the placenta is in the non-contractile portion of the uterus. There are no signs of separation of the placenta.

Danforth Graham and Ivy in a study of the functional anatomy of labor in the rhesus monkey found that the placenta begins to separate before the end of the second stage of labor and is soon complete following delivery of the fetus. This study was made upon frozen sections which were obtained by immersing the lightly anesthetized animals in a solution of ethyl alcohol and carbon dioxide in which the temperatures of −70 to −80 c. were attained and keeping the animal submerged for at least one hour. Their findings tend to confirm those of Leff mentioned above.

The technique which we are currently using in the management of the third stage of labor is based upon the concepts just outlined. Nothing new is claimed for this technique except for the use of the so-called Trendelenburg position during the repair stage.

Control of bleeding following the delivery of the placenta is effected by contraction of the myometrium. As is generally recognized general anesthesia impairs the contractility of the myometrium and for this reason we feel that the shorter the period of general anesthesia the less the chance of excessive bleeding. We use novocain pudendal nerve block which is given just before delivery of the baby and suffices for the repair. In this manner the general anesthetic can be stopped as soon as delivery of the head is imminent. In vertex presentations we use ergotrate (.2 mg.) intravenously just as the anterior shoulder is brought under the symphysis. Here again an attempt is being made to combat the effect of anesthesia and analgesia upon contractility of the myometrium. For you will recall that it is the contraction and change in shape and size of the uterus which is responsible for the separation of the placenta. As soon as the placenta is separated—and in most instances this oc-

*Read before the Manchester Medical Society, January 7, 1947.

curs within one to three minutes—it is delivered. For some time we have determined the separation of the placenta by vaginal examination and our findings confirm the observations of Leff mentioned above.

For some years it has been noted that the amount of bleeding following delivery of the placenta was increased if the uterus was allowed to descend into and to remain in the pelvis. It had been our custom to have an attendant hold, but not massage the uterus during the stage of the perineal repair. For some months we have substituted the force of gravity for the attendant by placing the patient in the Trendelenburg, or head down, position, after the delivery of the placenta. This keeps the uterus out of the pelvis, and the stimulus of the attendant's hand upon the abdomen of a patient who is recovering from anesthesia is absent. We feel that this is a definite refinement and helps to keep blood loss at a minimum.

Prevalence of Acne Among Tuberculous Patients.

Pimpling and blotching of the skin, known as acne vulgaris, "is more often seen among tuberculous patients, and it persists longer among them than in those who do not suffer from a general infection," states A. W. Stillians, M.D., of Chicago.

Writing in the current issue of the *Archives of Dermatology and Syphilology,* published by the American Medical Association, the skin specialist says that he made a survey of the patients at the City of Chicago Municipal Tuberculosis Sanitarium to determine the prevalence of acne among them. Data on 400 female patients with active pulmonary disease reveals that the ages of greatest incidence of acne were 17 to 26 inclusive. Of 163 patients within these age limits 129 had acne, a percentage of 79.1.

"The decline in frequency after 26 was slow," according to Dr. Stillians. "Between the ages of 27 and 50, of 174 patients, 63 per cent still had acne, and among 10 patients between the ages of 51 and 60 there were four in whom the acne still persisted. Thus it appeared that the presence in the body of active tuberculosis not only increased the frequency of acne but greatly prolonged its course."

Dr. Stillians, Emeritus Professor of Dermatology at the Northwestern University School of Medicine, points to the striking effect which tuberculosis has on these patients by "the persistence of acne in the tuberculous patient beyond the age at which it commonly clears in the person who is not tuberculous."

The author cites another investigator who reported that in 3,215 tuberculous patients there were 1,092 cases of acne or 34 per cent. He agrees with this author's explanation as to why more instances of acne were found among convalescent than among very ill patients. The body contains migratory defense cells against infection which also form part of the body's connective tissue. This system of cells becomes exhausted in the extremely ill patients and therefore there is no reaction. When convalescence has begun, the system revives enough to reproduce the reaction in the skin that is called acne.

PUBLIC HEALTH

L. J. ROPER, M. D.

State Health Commissioner of Virginia

The report of the Bureau of Communicable diseases of the State Department of Health for July, 1947, as compared with the same month in 1946, and for the period of January through July, 1947, compared with the same period in 1946, is as follows:

	July 1947	July 1946	Jan.-July 1947	Jan.-July 1946
Typhoid and Paratyphoid	11	20	53	58
Diarrhea and Dysentery	387	429	3,063	1,600
Measles	317	473	7,324	12,701
Scarlet Fever	25	70	845	2,022
Diphtheria	8	36	145	261
Poliomyelitis	10	14	28	23
Meningitis	8	9	72	159
Undulant Fever	14	5	44	33
Rocky Mountain Spotted Fever	20	20	40	49
Tularemia	2	4	33	38

COMBINED IMMUNIZATION

Mixed typhoid-paratyphoid vaccine has been in use over many years in the prevention of these enteric infections and it may be confidently accepted that satisfactory results have been achieved. Following this experience, and for biologic, economic and psychologic reasons, other combined immunizing agents have been developed and are available for use. Many physicians have introduced to their practice diphtheria-tetanus, diphtheria-pertussis and diphtheria-pertussis-tetanus vaccine with apparent satisfactory results. These and all other biologicals offered in interstate commerce are subject to certain standards set by the National Institute of Health. In this way most therapeutic and immunizing agents are tested for potency, sterility and toxicity.

The advantages of combined immunization are as follows:

1. The patient is more likely to complete necessary immunizations since a lesser number of visits and injections are made.

2. As with drug medication, a varying degree of synergistic action may occur, inducing higher levels of immunity against each disease.

3. Psychologically the important physician-patient relationship is frequently improved.

4. Economically valuable time and money are saved for all concerned.

Certain inherent disadvantages have also appeared:

1. The most appropriate immunization time may vary. For example, pertussin vaccine is now frequently advised at the age of two months or earlier, at which time most other immunizations are unnecessary and may be contraindicated.

2. Because of greater volume, concentration and combination of toxic materials, local and systemic reaction may be significantly greater.

3. More injections may be required for one disease than is allowed by the combination schedule. Two doses of diphtheria toxoid are recommended during the latter months of the first year, whereas military and some civilian authorities require three doses of tetanus toxoid.

The above objections are not of great significance usually, and to some extent may be overcome or are non-existent, and, as matters stand, combined immunization is considered worthy of further trial.

In conclusion, it is strongly advised that all children be vaccinated against smallpox during that age period between six and twelve months. This immunization may be advantageously given with the first or second injections of diphtheria, tetanus or combined toxoids, using the opposite arm. Through this technique secondary infections and complications are less likely to appear and the cosmetic result is more satisfactory.

Presidents of the Medical Society of Virginia

PRESIDENT	YEAR OF MEETING
*Dr. James McClurg, Richmond	1821
*Dr. William Foushee, Richmond	1822
*Dr. William Foushee, Richmond	1823
*Dr. James Henderson, Richmond	1824
Meetings Discontinued.	
*Dr. Robert William Haxall, Richmond	1841
*Dr. Robert William Haxall, Richmond	1842
*Dr. Frederick Marx, Richmond	1843
*Dr. Thomas Nelson, Richmond	1844
*Dr. William A. Patteson, Richmond	1845
*Dr. William A. Patteson, Richmond	1846
*Dr. John A. Cunningham, Richmond	1847
*Dr. William A. Patteson, Richmond	1848
	1849
*Dr. Robert William Haxall, Richmond	1850
*Dr. Beverley R. Wellford, Fredericksburg	1851
*Dr. James Beale, Richmond	1852
*Dr. Thomas P. Atkinson, Danville	1853
*Dr. Carter P. Johnson, Richmond	1854
*Dr. H. C. Worsham, Dinwiddie	1855
*Dr. H. C. Worsham, Dinwiddie	1856
*Dr. James Bolton, Richmond	1857
*Dr. Levin S. Joynes, Richmond	1858
Meetings Discontinued	
*Dr. R. S. Payne, Lynchburg	1870
*Dr. R. S. Payne, Lynchburg	1871
*Dr. A. M. Fauntleroy, Staunton	1872
*Dr. Harvey Black, Blacksburg	1873
*Dr. A. G. Tebault, London Bridge	1874
*Dr. S. C. Gleaves, Wytheville	1875
*Dr. F. D. Cunningham, Richmond	1876
*Dr. J. L. Cabell, University	1877
*Dr. J. H. Claiborne, Petersburg	1878
*Dr. L. S. Joynes, Richmond	1879
*Dr. Henry Latham, Lynchburg	1880
*Dr. Hunter McGuire, Richmond	1881
*Dr. G. W. Semple, Hampton	1882
*Dr. W. D. Cooper, Morrisville	1883
*Dr. J. E. Chancellor, Charlottesville	1884
*Dr. S. K. Jackson, Norfolk	1885
*Dr. Rawley W. Martin, Chatham	1886
*Dr. Bedford Brown, Alexandria	1887
*Dr. Benjamin Blackford, Lynchburg	1888
*Dr. E. W. Row, Orange C. H.	1889
*Dr. Oscar Wiley, Salem	1890
*Dr. W. W. Parker, Richmond	1891
*Dr. H. Grey Latham, Lynchburg	1892
*Dr. Herbert M. Nash, Norfolk	1893
*Dr. Wm. P. McGuire, Winchester	1894
*Dr. Robt. J. Preston, Abingdon	1895
*Dr. Wm. L. Robinson, Danville	1896
*Dr. Geo. Ben Johnston, Richmond	1897
*Dr. Lewis E. Harvie, Danville	1898
*Dr. Jacob Michaux, Richmond	1899
*Dr. Hugh T. Nelson, Charlottesville	1900
*Dr. J. R. Gildersleeve, Tazewell	1901
*Dr. R. S. Martin, Stuart	1902
*Dr. J. N. Upshur, Richmond	1903
*Dr. Joseph A. Gale, Roanoke	1904
*Dr. Wm. S. Christian, Urbanna	1905
Dr. Lomax Gwathmey, Norfolk	1906
*Dr. Paul B. Barringer, Charlottesville	1907
*Dr. Wm. F. Drewry, Petersburg	1908
Dr. Stuart McGuire, Richmond	1909
*Dr. E. T. Brady, Abingdon	1910
*Dr. O. C. Wright, Jarratt	1911
*Dr. Hugh M. Taylor, Richmond	1912
*Dr. Southgate Leigh, Norfolk	1913
*Dr. Stephen Harnsberger, Catlett	1914
*Dr. Samuel Lile, Lynchburg	1915
*Dr. Joseph A. White, Richmond	1916
*Dr. Geo. A. Stover, South Boston	1917
*Dr. Ennion G. Williams, Richmond	1918†
*Dr. Ennion G. Williams, Richmond	1919
*Dr. Paulus A. Irving, Farmville	1920
*Dr. Alfred L. Gray, Richmond	1921
*Dr. E. C. S. Taliaferro, Norfolk	1922
*Dr. John Staige Davis, University	1923
*Dr. W. W. Chaffin, Pulaski	1924
Dr. Hunter H. McGuire, Winchester	1925
Dr. W. L. Harris, Norfolk	1926
*Dr. J. Shelton Horsley, Richmond	1927
*Dr. J. W. Preston, Roanoke	1928
Dr. J. Bolling Jones, Petersburg	1929
*Dr. Charles R. Grandy, Norfolk	1930
*Dr. J. Allison Hodges, Richmond	1931
Dr. I. C. Harrison, Danville	1932
*Dr. J. C. Flippin, University	1933
Dr. R. D. Bates, Newtown	1934
Dr. F. H. Smith, Abingdon	1935
Dr. P. St. L. Moncure, Norfolk	1936
Dr. J. M. Hutcheson, Richmond	1937
*Dr. G. F. Simpson, Purcellville	1938
Dr. A. F. Robertson, Jr., Staunton	1939
Dr. H. H. Trout, Roanoke	1940
Dr. W. B. Martin, Norfolk	1941
Dr. Roshier W. Miller, Richmond	1942
Dr. J. M. Emmett, Clifton Forge	1943
*Dr. C. B. Bowyer, Stonega	1944
Dr. H. B. Mulholland, Charlottesville	1945
Dr. Julian L. Rawls, Norfolk	1946
Dr. W. L. Powell, Roanoke	1947

*Deceased.

†Owing to influenza epidemic during World War I, the council met in 1918, and Dr. Williams was continued as President.

PROGRAM

(PRELIMINARY)

100TH MEETING

MEDICAL SOCIETY OF VIRGINIA

HOTEL ROANOKE, ROANOKE

OCTOBER 13, 14, and 15, 1947

Monday, October 13

9:00 A.M.

REGISTRATION

9:30 A.M.

COUNCIL—President's Parlor

11:00 A.M.

HOUSE OF DELEGATES—Parlor B

2:30 P.M.

SCIENTIFIC SESSIONS

Section A—Ballroom

THE PSYCHOSOMATIC EFFECTS OF CHRONIC ILLNESS—David C. Wilson, M.D., Charlottesville

This paper will make an effort to present the changes in personality which occur in persons who will have or have had chronic illness. There are two stages: first, there is the reaction of the personality to the diagnosis, and next there are the personality changes that are caused by being sick for a long time.

PRACTICE OF PSYCHOSOMATIC MEDICINE—John F. Williams, M.D., Richmond

Brief introduction. Recent advances. Selected case histories illustrating various problems of diagnosis and treatment. (*Lantern slides.*)

Discussion—R. C. Siersema, M.D., Richmond

USE OF VITAMIN E IN THE MENOPAUSE SYNDROME—Homer E. Ferguson, M.D., Richmond

A new era in the vitamin field has come forth in the use of Vitamin E in the treatment of menopausal patients. To date only a few persons have given the new therapy but this paper presents some of the findings noted in patients on such therapy and its effects on the menopausal syndrome.

Discussion—Howard R. Masters, M.D., Richmond

VARIED ALLERGIC REACTIONS TO PENICILLIN—James B. Black, Jr., M.D., J. Warrick Thomas, M.D., W. Randolph Graham, M.D., and DuPont Guerry, III, M.D., Richmond

A review of the literature of the various forms of penicillin allergy has been made. Suggestions are made for the handling of penicillin reactions. Precautions are outlined regarding prevention and therapy for the patient sensitive to penicillin. (*Lantern slides.*)

Discussion—Oscar Swineford, M.D., Charlottesville

ADVANTAGES OF INDIRECT SKIN TESTING FOR YOUNG ALLERGIC CHILDREN—W. Ambrose McGee, M.D., Richmond

Skin testing for infants and young children is not only more difficult than for adults but at times results in emotional upsets and prolonged fears. This great disadvantage can be offset and even improved upon by the indirect method of skin testing. In addition, this method makes available thorough allergic studies, in areas where physicians are not trained or equipped to handle allergic problems.

Discussion—Leta J. White, M.D., Petersburg

FALSE POSITIVE SEROLOGICAL TESTS—J. W. Love, M.D., Alexandria

This includes the recognition of increasing frequency of false positives, a classification of such tests in blood and spinal fluids, a clinical classification, and a discussion of these various disease groups. A conclusion in regard to the function of the attending syphilologist.

Discussion—E. E. Barksdale, M.D., Washington, D. C.
D. C. Smith, M.D., Charlottesville
R. D. Kimbrough, M.D., Richmond

Monday, 2:30 P.M.

Section B—Parlor B

RESULTS OF VAGOTOMY—Staige D. Blackford, M.D., and Alexander McCausland, M.D., Charlottesville.

The various treatments of peptic ulcer are briefly reviewed and the literature on vagotomy is brought up to date with a general appraisal of the problem. An analysis of fifteen cases subjected to vagotomy at the University of Virginia Hospital is briefly given.

Discussion—I. A. Bigger, M.D., Richmond

THE TREATMENT OF PEPTIC ULCER—Guy W. Horsley, M.D., Richmond

The modern treatment of gastric and duodenal ulcer is reviewed, considering both medical and surgical aspects.

The indications for gastric vagotomy with its complications and end results are given.

Discussion—Robert Lee Payne, M.D., Norfolk

DIAGNOSIS AND TREATMENT OF DIVERTICULITIS OF THE COLON—Carrington Williams, M.D., and Carrington Williams, Jr., M.D., Richmond

This paper will discuss the incidences of diverticulosis and diverticulitis and will set forth the symptoms and signs which may lead to the diagnosis of the condition by x-ray examination of the colon. The medical and surgical treatment of the condition, and its complications will be discussed in some detail.

THE USE OF EARLY RISING AND EARLY AMBULATION FOLLOWING SURGICAL OPERATIONS—Herbert C. Lee, M.D., Richmond

The problem of when to get surgical patients out of bed following operations has long been a controversial subject. The recent vogue of early rising has shown how advantageous this practice is and on what sound physiologic principles it is based. There are definite contraindications to early rising and these points are discussed also. (*Lantern slides.*)

Discussion—C. Bruce Morton, M.D., Charlottesville
Ernest T. Trice, M.D., Richmond

ROENTGEN THERAPY OF BURSITIS—Fred M. Hodges, M.D., and Randal A. Boyer, M.D., Richmond

A review of three hundred cases of bursitis in various portions of the body is considered in the paper. Roentgen therapy is shown to be particularly valuable in the acute cases showing calcification. Relief of pain is often dramatic.

Discussion—J. L. Tabb, M.D., Richmond

THROMBOSIS OF THE DEEP VEINS OF THE LOWER EXTREMITY—Donald S. Daniel, M.D., Richmond

The greatest problem in surgery today is thrombosis of the lower extremities with subsequent pulmonary embolism. The etiology, pathology, and preventive treatment are to be discussed in hopes that this dreaded post-operative complication can be controlled.

Monday, 6:00 P.M.
Alumni Dinner—Medical College of Virginia

General Session
Monday, 8:00 P.M.
Ballroom

Call to Order—Frank A. Farmer, M.D., Chairman, Committee on Arrangements

Invocation

Announcements

Introduction of President

President's Address—William L. Powell, M.D., Roanoke

Memorial Hour—B. E. Harrell, M.D., Norfolk, Chairman, Membership Committee

1820—The Virginia Doctor and His Times—Wyndham B. Blanton, M.D., Richmond

Progress of Medicine in America in the Past One One Hundred Years—R. H. Shryock, Ph.D., Philadelphia

Public Relations—Henry S. Johnson, Director of Public Relations

100th Birthday Party

Tuesday, October 14
8:00 A.M.
Breakfast—Virginia Section, American Academy of General Practice

8:30 A.M.
House of Delegates—Parlor B

9:00 A.M.
Scientific Sessions
Section A—Ballroom

THE CLINICAL SIGNIFICANCE OF THE RH FACTOR—W. C. Winn, M.D., Richmond

All pregnant patients should have Rh typing done on the first pre-natal visit. Rh negative woman with Rh positive husband, however, can have uneventful pregnancies with normal healthy children. All Rh negative patients, especially women of all ages, should be transfused only with Rh negative blood. (*Lantern slides.*)

HEMOLYTIC ANEMIA IN THE NEWBORN—Edwin L. Kendig, Jr., M.D., Richmond

Thirty cases of hemolytic anemia in the newborn are reported. Causation and management of the condition are discussed. (*Lantern slides.*)

Discussion of Papers by Drs. Winn and Kendig—J. H. Scherer, M.D., Richmond

TETANUS NEONATORUM—John S. Weitzel, M.D., Richmond

Report of a case with recovery. During the 19th century and the first twenty-five years of the 20th century, tetanus neonatorum was an extremely frequent and usually fatal disease; today, it is, fortunately, a medical curiosity. Cook County Hospital reported only three cases in twenty years. (*Lantern slides.*)

Discussion—Lee E. Sutton, M.D., Richmond

FACTORS IN PREGNANCY AFFECTING THE NEW BORN—F. N. Mullen, Jr., M.D., Norfolk

A review of the literature on the effect of german measles and other diseases during pregnancy which have caused or thought to have caused congenital defects on infants. There will be reports of defects on congenital anomalies in the newborn of experimental animals exposed to x-rays during different ages of fetal life. Also the effect of the absence of certain vitamines in the diet in its relation to such defects.

Discussion—Lee E. Sutton, M.D., Richmond

NUTRITIONAL MANAGEMENT OF THE NEPHROTIC SYNDROME—Lee E. Sutton, Jr., M.D., and Harry Y. Spence, M.D., Richmond

This report stresses the use of a supplementary high protein, high caloric feeding in the nephrotic patient. Certain considerations are to be given concerning the amino acid make up of the special supplement and relationship of nitrogen balance in the nephrotic child to dietary intakes.

Discussion—H. St. George Tucker, M.D., Richmond

INFANTILE ECZEMA IN GENERAL PRACTICE—Thomas W. Murrell, Jr., M.D., and Emily Gardner, M.D., Richmond

Infantile eczema will be discussed under the following headings: etiology; differential diagnoses; complications; dietary management; indications for allergic treatment and investigations; topical applications; internal medications; general care; prognosis; and education of the patients as to care and prognosis.

Discussion—J. Warrick Thomas, M.D., Richmond

Tuesday, 9:00 A.M.
Section B—Parlor B

TIC DOULOUREUX: REVIEW OF 200 CASES TREATED BY SURGERY—Claude C. Coleman, M.D., Charles E. Troland, M.D., and John M. Meredith, M.D., Richmond

Two hundred cases of tic douloureux that were treated by surgery are analyzed as to age, race, side and distribution of pain, and results. The differential diagnosis of trigeminal neuralgia is discussed and the operative treatment outlined. (*Lantern slides.*)

Discussion—R. Finley Gayle, M.D., Richmond

THE SIGNIFICANCE OF PARALYSIS OF THE LARYNX—Fletcher D. Woodward, M.D., Charlottesville

This paper covers the clinical aspects of the various types of paralyses and their causes and illustrates the surgical correction of the bilateral paralyses by *motion picture film and lantern slides.*

Discussion—C. T. Burton, M.D., Roanoke

THYROID SURGERY—John W. Devine, M.D., and John W. Devine, Jr., M.D., Lynchburg

This paper presents the diagnosis, pre- and post-operative care of thyroid disease, and our experience with Thiourea derivatives. The surgical technique of the thyroidectomy is illustrated with Kodachrome slides. Two hundred and thirty-two successive thyroidectomies are reported. (*Lantern slides.*)

Discussion—Hugh H. Trout, Jr., M.D., Roanoke

HEMORRHAGIC DISORDERS: DIAGNOSIS AND TREATMENT—Byrd S. Leavell, M.D., and Howard P. Holt, M.D., Charlottesville

A discussion of factors concerned in hemostasis and the present theories of blood coagulation; our present concepts of each one of the hemorrhagic diseases with illustrated cases; primary and secondary thrombocytopenia and our present ideas regarding the cause of bleeding and thrombocytopenia; and factors responsible for deficient coagulating mechanism.

Discussion—Julian R. Beckwith, M.D., Clifton Forge

THE DIAGNOSIS AND TREATMENT OF NEUROSYPHILIS WITH NEGATIVE BLOOD AND SPINAL FLUID—James Asa Shield, M.D., Richmond

This paper presents a small series of cases and autopsy statistics. A very brief case report is made in each one of these cases, pointing out the therapy's being either malaria or malaria-penicillin combination. (*Lantern slides.*)

Discussion—Harry Brick, M.D., Richmond

12:00 Noon
Ballroom

Gastrointestinal Symptoms Occurring in Diseases Located Outside of the Gastrointestinal Tract—W. Halsey Barker, M.D., (*Guest*), Baltimore, Maryland.

Tuesday, 1:00 P.M.
Special Society Luncheons

2:30 P.M.
Ballroom

PROGRESS REPORT OF THE COOPERATIVE STUDY ON STREPTOMYCIN IN CLINICAL TUBERCULOSIS—William H. Harris, M.D., Richmond

The Richmond Veterans Administration Hospital is one of a group of cooperating hospitals pooling the resources of the National Research Council, American Trudeau Society, Army, Navy and the Veterans Administration in a study of the clinical use of streptomycin in tuberculosis. This paper presents the experiences of the entire group during the past year. (*Lantern slides.*)

Discussion—Wyatt E. Roye, M.D., Richmond

THE MANAGEMENT OF EARLY SYPHILIS—Dudley C. Smith, M.D., Charlottesville

The management of early syphilis is discussed from two aspects: (1) practical epidemiology and (2) present day therapy. (*Lantern slides.*)

Discussion—W. W. S. Butler, M.D., Roanoke

3:30 P.M.
Ballroom

Peripheral Diseases and Newer Concepts of their Management — Frederick A. Coller, M.D. (*Guest*), Ann Arbor, Michigan.

GOUT SIMULATING RHEUMATOIL ARTHRITIS—William A. Read, M.D., and Russell Buxton, M.D., Newport News

A case report including slides demonstrating the patient, biopsy specimens and x-ray changes. The importance of

diagnosis and the pathological physiology of the joint changes are stressed. (*Lantern slides.*)

Discussion—Russell Buxton, M.D., Newport News

PREGNANCY AND DIABETES—William R. Jordan, M.D., Richmond

The present more frequent occurrence of pregnancy in diabetics justifies a discussion of this combination. The influence of pregnancy on the diabetes with the tendency to acidosis, low renal threshold, and marked changes in severity of diabetes before and after delivery will be emphasized. The high fetal mortality in spite of diabetic treatment is noted; and the result of studies of chorionic gonadotropin and the corrective treatment for the same and the change in fetal mortality rate will be described.

MEDICAL PRACTICE ON THE VIRGINIA PENINSULA SIXTY YEARS AGO—Chester D. Bradley, M.D., and Miriam D. Bradley, R.N., B.S., Newport News

The recently discovered Transactions of the Peninsula Medical Society, 1884-1893, which came to light among the books of the late Dr. Harry D. Howe of Hampton offer a most intimate glance into the medical life of the 1880's which was a glorious decade in the history of world medicine. Interesting facts are revealed from research growing out of the study of these Transactions.

Discussion—M. P. Rucker, M.D., Richmond

6:00 P.M.

End of Ballroom

President's Cocktail Party

7:00 P.M.

Ballroom

Banquet and Entertainment

Wednesday, October 15

9:00 A.M.

Ballroom

REVIEW OF 100 CASES OF CORONARY THROMBOSIS WITH MYOCARDIAL INFARCTION—Allen E. LeHew, M.D., and Julian R. Beckwith, M.D., Clifton Forge

A brief review of the literature, a tabulation of the symptoms and signs and clinical courses in all cases, mortality, and functional results.

Discussion—J. Edwin Wood, Jr., M.D., Charlottesville

THE ROLE OF AMMONIUM CHLORIDE AND OTHER ACID PRODUCING SUBSTANCES IN THE TREATMENT OF CONGESTIVE HEART FAILURE—A. J. Crutchfield, Jr., M.D., and J. Edwin Wood, Jr., M.D., Charlottesville

With observations made on several heart failure patients as a point of reference, we shall present: (1) A discussion of the intermittent versus and continuous administration of these substances; (2) The probable mechanism of diuresis with administration of these substances alone and the apparent explanation of the potentiation of xanthine and mercurial diuresis by concomitant administration of the acidifying substances; and (3) Indications, contraindications and dosage. (*Lantern slides.*)

Discussion—R. Earle Glendy, M.D., Roanoke

SOME ASPECTS OF THE RHEUMATIC PROBLEM IN SOUTHWEST VIRGINIA — R. Earle Glendy, M.D., Roanoke

This paper is to deal with the incidence of chronic rheumatic valvular disease in a series of patients with heart disease of all kinds and in all age groups. Certain points in the prophylaxis, diagnosis, prognosis, and treatment will be emphasized. (*Lantern slides.*)

Discussion—William M. Moir, M.D., Roanoke

THE HISTORY—AN IMPORTANT FACTOR IN DIAGNOSIS OF CORONARY THROMBOSIS—Ernest L. Copley, M.D., Richmond

This discusses the diagnosis of coronary thrombosis and evaluates the aids helpful in recognizing the condition. The importance of a clear history will be emphasized.

Discussion—Paul D. Camp, M.D., Richmond

TREATMENT OF BRONCHIAL ASTHMA — K. D. Graves, M.D., Roanoke

Prevention—avoiding exposure to offending substances; medication; physical measures—such as washed air, change of climate and administration of oxygen and helium; and prognosis. (*Lantern slides.*)

Discussion—Oscar Swineford, M.D., Charlottesville

THE PRACTICAL APPLICATION OF UNIPOLAR LEADS IN CLINICAL ELECTROCARDIOGRAPHY — Reno R. Porter, M.D., and Nathan Bloom, M.D., Richmond

Experience with unipolar leads has shown that these supplementary leads give additional information not furnished by the routine leads. In certain instances they are of particular value in determining the true status of the heart where the usual leads gave insufficient or equivocal data. (*Lantern slides.*)

Discussion—R. Earle Glendy, M.D., Roanoke

Prepaid Medical Care Plans—Frank E. Smith *(Guest)*, Director Associated Medical Care Plans, American Medical Association, Chicago.

Installation of Guy R. Fisher, M.D., as president.

Adjournment.

TECHNICAL EXHIBITS

Palm Room, Corridor and Railroad Room

	Space Number
A. S. Aloe Company	3
Bilhuber-Knoll	19
The Borden Company	5
Camel Cigarettes	25-26
Ciba Pharmaceutical Products, Incorporated	16
Doak Company, Incorporated	4
The Doho Chemical Corporation	24
C. B. Fleet Company, Incorporated	22
General Electric X-Ray Corporation	28
Hoffman-LaRoche, Incorporated	15
Holland-Rantos Company, Incorporated	32
Lanteen Medical Laboratories, Incorporated	33
Lederle Laboratories, Incorporated	43
Liebel-Flarsheim Company	30-31
Eli Lilly and Company	2
J. B. Lippincott Company	29
Mead Johnson and Company	10-11
Meridian Electronic Equipment Company	21
Ortho Pharmaceutical Corporation	37
Parke, Davis and Company	6
Peoples Drug Stores	1
Philip Morris and Company	14
Powers and Anderson, Incorporated	12
William P. Poythress and Company, Incorporated	34
Reed and Carnrick	7
A. H. Robins Company	38
G. D. Searle and Company	39
Schering Corporation	18
Sharp and Dohme, Incorporated	17
E. R. Squibb and Sons	8
Smith, Kline and French Laboratories	40
Tablerock Laboratories	9
Valentine Meat-Juice Company	25
Van Pelt and Brown, Incorporated	20
U. S. Vitamin Corporation	23
White Laboratories, Incorporated	41
Winthrop Chemical Company, Incorporated	13
Zimmer Manufacturing Company	42

BOOK ANNOUNCEMENTS

The Pharmacopoeia of the United States of America. (The United States Pharmacopoeia). Thirteenth Edition. By Authority of the United States Pharmacopoeial Convention, meeting at Washington, D. C., May 14 and 15, 1940. Prepared by the Committee of Revisions and Published by the Board of Trustees. Official from April 1, 1947. Mack Publishing Company, Easton, Pennsylvania. 1947. cvii-957 pages. Cloth.

One of the most striking differences between this and previous editions of the Pharmacopoeia is the preference given to English titles. Latin titles are, of course, retained, but follow the English titles. The basic drug appears first, and the preparations follow, thereby permitting a grouping never before possible. Thus is found together digitalis, digitalis capsules, the injection, the powder, the tablets, the tincture, and then the purified glycocides digotoxin and digoxin. This plan enables the pharmacist and the physician to find in one place all available official forms of a drug.

Preference is given for metric doses and for quick reference as to metric-apothecary equivalents, a table printed in red, is reproduced inside the back cover.

Some 95 new substances have been added to this Thirteenth Revision, thereby maintaining it up to modern therapeutic requirements. In this list of new additions will be found: Aluminum Phosphate Gel, Benzyl Benzoate Lotion, Calamine Lotion, Digitoxin, Digoxin, Lanatoside C, Penicillin and its preparations, Sulfamerazine, Vinyl Ether, and many other important recent additions to our therapeutic armamentarium.

At a recent meeting of the Pan-American Sanitary Conference at Caracas, Venezuela, a resolution was passed unanimously urging all Central and South American countries, which do not have their own Pharmacopoeia to adopt the U.S.P. Prior to this action six of these countries (Cuba, Costa Rica, the Dominican Republic, Nicaragua, Panama, and Uruguay) had all taken that action. It has recently been announced that the Empire of Ethiopia has also adopted the U.S.P. This expanding popularization of the U. S. Pharmacopoeia indicates the increasingly important role that it is playing in the matter of drug standardization.

The physician will find much of practical interest and value within this last Revision of the Pharmacopoeia, and it is highly recommended that it become a part of his working library. It is unquestionably the best book of its kind in the world.

H. B. HAAG.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President—MRS. J. E. HAMNER, Petersburg
President-Elect—MRS. J. L. DECORMIS, Accomac
Recording Secretary—MRS. M. H. HARRIS, West Point
Corresponding Secretary,
MRS. MEADE EDMUNDS, Petersburg
Treasurer—MRS. REUBEN SIMMS, Richmond
Editorial Chairman—MRS. E. HOLLAND TROWER, Eastville

PROGRAM (Tentative)

Twenty-fifth Annual Meeting

Roanoke, Virginia October 14, 1947.
Headquarters—Hotel Roanoke

A most cordial invitation is extended to all women who are Auxiliary members or guests of physicians attending the Convention of the Medical Society of Virginia to participate in all social functions and attend the general session. Whether Auxiliary members or not, wives of doctors will be most welcome.

Registration Booth open Monday, October 13, from 5:00 P. M. to 8:00 P. M. and Tuesday, October 14, from 8:00 A. M. to 10:00 A. M.

Each woman is requested to register promptly upon arrival, either as delegate or visitor. (Registration fee—25 cents.)

Where there are no auxiliaries, the women are asked to become members-at-large and make this known to the registrar.

CHAIRMAN OF LOCAL ARRANGEMENTS:
Mrs. T. Allen Kirk, Roanoke.

Monday, October 13

5:00 P. M.—Registration Booth open until 8:00 P. M.

8:00 P.M.—Ball Room—General Session of the Medical Society of Virginia followed by Birthday Party.

Tuesday, October 14

8:00 A. M.—Registration Booth open until 10:00 A. M.

8:30 A. M.—Pre-Convention Board Meeting—Room 24, Hotel Roanoke.

All local presidents, presidents-elect (or vice-presidents where there is no president-elect), State officers and chairmen are expected to attend this meeting.

GENERAL ANNUAL MEETING

9:30 A. M.—Room 24, Hotel Roanoke.

Whether Auxiliary Members or not, wives of doctors will be most welcome.

Mrs. J. E. Hamner, President, presiding.

Invocation.

Address of Welcome.

Response.

Report of Committee on Arrangements.

Report of Committee on Registration and Credentials.

In Memoriam.

Minutes of the twenty-fourth Annual Convention.

Report of Post-Convention Board Meeting.

Report of Mid-winter Board Meeting.

Report of Pre-Convention Board Meeting.

Roll Call of Local Auxiliaries.

President's Message

Announcements.

Guest Speakers.

Report of officers and chairmen of standing committees.

Report of local presidents.

Report of Councilor to Woman's Auxiliary to Southern Medical Association.

Report of delegates to Annual Meeting of Woman's Auxiliary to American Medical Association.

Unfinished Business.

New Business.

Recommendations from the Board.

Reports:

Committee on Resolutions.

Nominating Committee.

Election of Officers.

Installation of Officers.

Presentation of Gavel.

LUNCHEON MEETING

1:30 P. M.—"Auxiliary Day" Luncheon (subscription). Honoring invited guests of the Society and the Auxiliary with their husbands and wives, honorary Auxiliary Members, the retiring and incoming presidents of the Medical Society of Virginia, and the Advisory Council and their wives.

Address—Dr. W. L. Powell, President, Medical Society of Virginia.

Inaugural Address of President—Mrs. J. L. DeCormis.

Guest Speakers:

President, Woman's Auxiliary, American Medical Association—Mrs. Eustace A. Allen, Atlanta, Georgia.

President, Woman's Auxiliary, Southern Medical Association—Mrs. Wiley R. Buffington, New Orleans, Louisiana.

Adjournment.

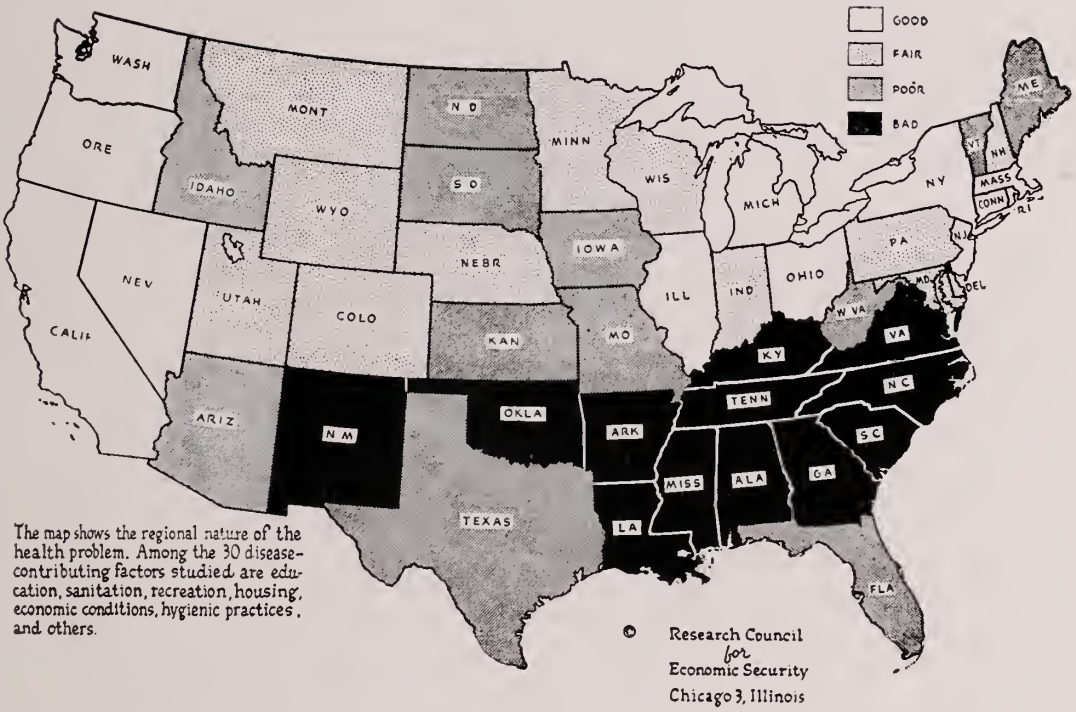
3:00 P. M.—Post-Convention Board Meeting.

6:00 P. M.—Cocktail Party.

7:00 P.M.—Banquet and entertainment.

EDITORIALS

Our National Health Problem



The map shows the regional nature of the health problem. Among the 30 disease-contributing factors studied are education, sanitation, recreation, housing, economic conditions, hygienic practices, and others.

Economic Resources

IN the survey of the Research Council for Economic Security, Wealth per Capita in 1937, Income per Capita and Savings per Capita, are grouped together under economic resources. In this respect Virginia ranked 28th. In wealth her citizens averaged $2,144 against $2,335 for the country as a whole. The average income per capita was $450 against $575 and the average citizen had $101 in bank as compared with $156 for the entire United States. While wealth is no guarantee of good health, poverty is certainly an important factor in poor health. In the last analysis poverty is the one reason why the whole southern area except Texas and Florida is the black part of the map.

Dr. C. B. Bowyer

DR. CLAUDE BERNARD BOWYER, 87th president of the Medical Society of Virginia, died unexpectedly at his home in Stonega, Virginia, on July 29th. He was accorded all the honors befitting a first citizen. His body lay in state in the First Methodist Church in Appalachia, and was buried at Emory close to Bishop Waterhouse. The services were conducted by Dr. J. N. Hillman, ex-president of Emory and Henry, Dr. J. Foye Gibson, president of Emory and Henry, and his local pastor at Stonega.

Dr. Bowyer was a power in medicine and in the business and professional life of Southwest Virginia. He was a pioneer in industrial medicine and had much to do with framing Virginia's Workman's Compensation Law. He was a charter member of the College of Industrial Physicians and Surgeons of the American Medical Association.

Claude Bernard Bowyer was born on the campus of Emory and Henry College on Christmas Day, 1880. He graduated at Emory and Henry in 1902 and from the Medical College of Virginia in 1906. At the time of his death he was a member of the Executive Board of Trustees of the former and the Board of Visitors of the latter. He was an active and loyal member of the Medical Society of Virginia, organizing the component societies in Clinch Valley and Wise County. He served on the Council from 1918 to 1942. His presidency in 1943-44 was a memorable one in trying and difficult times.

"Neither the sun nor death can be looked at with a steady eye."

—LA ROCHEFOUCAULD

Edinburgh

EDINBURGH is so steeped in Medical history that even a casual visitor gets a taste of it. We were on our vacation with our mind set on other things than medical. Never-the-less, we could scarcely overlook the heroic bronze statue on Princes Street of Sir James Y. Simpson. After that we were obliged to look up the house in which he lived when he discovered the anesthetic property of chloroform. The chemist shop of David Walde, a discoverer of chloroform, in nearby Linlithgow, is marked by a bronze tablet. Walde, be it remembered, was the one who suggested to Professor Simpson that he try chloroform, when he was searching for an acceptable substitute for the inflammable and rather disagreeable ether. A book seller on Princes Street from whom we bought a map marked on the map the location of Simpson's House. It was on Queen Street between Frederick and Castle, just around the corner from the Sir Walter Scott House. We readily found the house for there is a brass plate on the door declaring to the world that this is the Simpson House and a tablet on the wall of the second story gave the story in more detail. Imagine our surprise when the next day our guide on a sight seeing tour pointed out a house on High Street, the Royal Mile, between the Castle and Holyroadhouse, and said that in that house Professor Simpson discovered chloroform, and repeated the familiar story of his wife finding him asleep under the dining table. He went on to say that he was professor of midwifery in the medical school and that a new building in the Royal Infirmary was erected as a memorial to him and that he is buried in the nearby Warriston cemetery.

But that was not all the medical stories our guide told. As we went down Lothian Road he pointed to a small round tower in St. Cuthbert's Church yard and told us that a watchman used to be stationed there to prevent grave robbing and when we had got-

ten around by Greyfriars Church yard he pointed to the iron fences around each grave, which he said were for the same purpose. He told us about the infamous "resurrectionists", Burke and Hare, who when grave robbing became too troublesome resorted to murder. They would lure unsuspecting strangers into a back room, murder them and turn the bodies over to the surgeons. "That is why they have such good surgeons in Scotland." When the resurrectionists were apprehended, Hare turned states evidence and Burke was hanged. His skeleton is preserved in the University, at least that is what the guide said.

Eclampsia

THE second day of the International Congress of Obstetricians and Gynecologists to celebrate the Bicentenary of the Rotunda Hospital, which was held at the Royal College of Surgeons in Ireland, was devoted to eclampsia. Professors of obstetrics from all over the world, Dublin, Edinburgh, New York, Boston, Calcutta, Cincinnati, Capetown, London, Melbourne, Brussels, Amsterdam, Leyden, Sydney, Montreal, Aberdeen, Rotterdam, Cambridge, Hong Kong, and Ayrshire, took part in the discussion. Stander, in a masterly manner, discussed the etiology. He grouped the many theories in three categories: (a) outside the body; (b) inside the body; and (c) in the genital tract. He discarded a and b and predicted that the cause of eclampsia would be found in the placenta, but that much more work would have to be done to substantiate the idea. On the other hand, Hofbauer declared very emphatically that he had discovered the cause of eclampsia; that it was due to acetycholine in the placenta which in some way, he did not make clear, acted on the adrenal cortex and the posterior pituitary and in that way produced the fits. Theobold said there was no acetycholine in the placenta, but that the spleen and liver contained a lot, if that mattered, and Browne of Montreal said the changes in the adrenals that Hofbauer described were found in normal pregnancy—and so the discussion went with no punches pulled.

Probably the most interesting part of the discussion concerned statistics during the war years, really mass experiments in dietetics. The death rate from eclampsia dropped tremendously during the war. In fact, as Theobold said, it was the first and only time that there had been a decline in deaths from toxemia in Great Britain and Wales. He attributed it to milk and vitamins issued to pregnant women and to the fact that they were rationed which meant that they took them. Theobold referred to King's statistics from China which showed that eclampsia was frequent when beri-beri was prevalent, but this did not hold true for Ceylon and Siam. Nevertheless he thought some unknown vitamin of the B group was an important factor in the causation or rather the prevention of eclampsia.

However, most of the discussion centered around treatment. Irving said that veratrum viridi had greatly improved his results at the Boston Lying-In Hospital. Others said they would be afraid to go back to veratrum viridi. The present master of the Rotunda had given up the Tweedy Method, which was the earliest conservative treatment, and was resorting to Caesarean section more frequently and O'Daniel Browne showed that the mortality at the Rotunda had risen since Tweedy's mastership. The great majority of the discussion advocated conservative treatment. Some stressed good nursing, some advocated bromether, some magnesium sulphate, and some morphine. It was repeatedly stated that the disease was self-limited, and if the fits could be stopped and the patient kept alive for thirty-six to forty-eight hours, she would recover. Many stressed the importance of oxygen. Lloyd of Cambridge reported on the use of curare.

A glucose intravenous drip was started and connected with it was a solution of pentothal and another of curare; when the patient began to twitch a little pentothal and a little curare were injected and the patient could not have a fit. Both of his patients recovered.

Professor Johnstone, the vice-chairman, summed up the discussion admirably and quoted from Omar Khayyam to the effect that we would go out by the same door by which we had come in, but that we would not go out empty handed, that when we had had time to digest what we had heard we would all profit by the discussion.

SOCIETIES

Virginia State Board of Medical Examiners.

At the meeting of the Board, June 18-21, 1947, the following were licensed to practice in Virginia:

THROUGH EXAMINATION

Dr. Robert Whitehead Alfriend, Norfolk.
Dr. Thomas Henry Alphin, Charlottesville.
Dr. Franklin Lynwood Angell, Richmond.
Dr. Robert Willoughbee Bradley, Sabot.
Dr. Carl Ashton Broaddus, Jr., Charlottesville.
Dr. William Knox Brown, Dallas, Tex.
Dr. Howard Olsen Burnette, Richmond.
Dr. John Abbott Byrd, Parksley.
Dr. Louis Herman Calisch, Charlottesville.
Dr. George Edward Calvert, Richmond.
Dr. Arthur Allen Carr, War, W. Va.
Dr. Charles Whitney Caulkins, Jr., Nashville, Tenn.
Dr. Edmond Madison Chitwood, Jr., Charlottesville.
Dr. David Alexander Christian, III, Appomattox.
Dr. George N. Chucker, Monterey.
Dr. Herbert Augustine Claiborne, Jr., Richmond.
Dr. Alize Cole, Richmond.
Dr. Claude C. Coleman, Jr., Richmond.
Dr. Wilford Anderson H. Councill, Jr., Baltimore, Md.
Dr. William Arthur Cover, Elkton.
Dr. Dorris Alvin Cunningham, Jonesville.
Dr. Waverley B. Dashiell, Norfolk.
Dr. Henry Chesley Decker, Richmond.
Dr. Powell Garland Dillard, Jr., Lynchburg.
Dr. Austin Ingram Dodson, Jr., Richmond.
Dr. Wayne Wilson Dutton, Chilhowie.
Dr. Norman Ende, Petersburg.
Dr. Nathaniel McGregor Ewell, Jr., Durham, N. C.
Dr. Richard Harding Fisher, Richmond.
Dr. Claiborne Willcox Fitchett, Norfolk.
Dr. William Patton Fite, Jr., Muskogee, Okla.
Dr. Harry Clifford Foster, Jr., Charlotte, N. C.
Dr. Milton David Friedenberg, Richmond.
Dr. Robert C. Green, Jr., Winchester.
Dr. David Jeremiah Greenberg, Richmond.
Dr. Matthew Hill Grimmett, Durham, N. C.
Dr. Stuart Leslie Haas, Brooklyn, N. Y.
Dr. Richard Littleton Haines, Catskill, N. Y.
Dr. James P. Harnsberger, Richmond.
Dr. Fleming Bates Harper, Richmond.
Dr. Seymour Elliott Harris, Richmond.
Dr. Waldo Cornell Henson, Jr., Charleston, W. Va.
Dr. Eugene Augustus Hildreth, Jr., Toledo, Ohio.
Dr. Douglass Orville Hill, Waynesboro.
Dr. John Edward Hill, Richmond.
Dr. Emory Falcon Hodges, Jr., Petersburg.
Dr. Thomas Martin Horsley, Kecoughtan.
Dr. Charles Edwin Horton, Vienna.
Dr. Catherine Ann Howard, Hampton.
Dr. Lawrence Max Howard, Lynchburg.
Dr. William Herbert Howell, Jr., Morgantown, W. Va.
Dr. Harry J. Hyer, Charlottesville.
Dr. Jerome Imburg, New Orleans, La.
Dr. Benjamin Lewis Jamison, Covington.
Dr. James Barrett Jones, Rochester, N. Y.
Dr. Kasper Kaufman, Petersburg.
Dr. Robert Daniel Keeling, Norfolk.
Dr. James Maurice Knopp, Staunton.
Dr. Henry Clayton Landon, III, Wilkesboro, N. C.
Dr. Gerald A. LoGrippo, New York City, N. Y.
Dr. William Andrew MacIlwaine, University.
Dr. John Jefferson Mahood, Bluefield, W. Va.
Dr. Robert Quarles Marston, Richmond.
Dr. Malcolm Bruce Martin, Richmond.
Dr. John Houston McClung, Lexington.
Dr. William West McClure, Richmond.
Dr. Charles Hymerick Meeks, Richmond.
Dr. Charles Theodore Michele, Philadelphia, Pa.
Dr. Joseph Walton Milam, Sutherlin.
Dr. Philip Lee Allen Minor, Richmond.
Dr. Eric Gaston Mitchell, Norfolk.
Dr. Walter Stephenson Newman, Jr., Blacksburg.
Dr. George Jeffries Oliver, Jr., Williamsburg.
Dr. Lloyd Lein Olsen, Richmond.
Dr. Harold Truman Osterud, Ashland.
Dr. Robert Edward Paine, Jr., Roanoke.
Dr. Rea Parker, Jr., Smithfield.
Dr. Francis Robert Payne, Jr., Richmond.
Dr. Edwin Pearlman, Norfolk.

Dr. Horace Eugene Perkins, Richmond.
Dr. Earl Raymond Peters, Richmond.
Dr. James Andrew Pettigrew, Ivanhoe.
Dr. James Wyatt Phillips, Richmond.
Dr. Forrest Williford Pitts, Richmond.
Dr. William Barrett Pope, Jr., Portsmouth.
Dr. Wilson Albert Powell, Jr., Norfolk.
Dr. William Wayne Quisenberry, Baltimore, Md.
Dr. Robert Ray Rector, Roanoke.
Dr. Ralph Sidney Riffenburg, Blacksburg.
Dr. Frank Marcellus Ripberger, Jr., Blackstone.
Dr. Nathaniel Lancaster Rodgers, Martinsburg, W. Va.
Dr. Jay Emmett Rogers, Jr., Charleston, W. Va.
Dr. Edward George Rosanelli, New York City, N. Y.
Dr. Edward Howard Scherr, Washington, D. C.
Dr. Joseph Alpheus Solomon, Arlington.
Dr. Benjamin Decatur Spencer, Charlotte, N. C.
Dr. Columbus Downing Tait, Jr., Chester.
Dr. John Sheffield Tennant, Newtonville, Mass.
Dr. Vincent Totim, Petersburg.
Dr. Ernest Randolph Trice, Seattle, Wash.
Dr. Asa Vicellio, Chatham.
Dr. Fred Walls, Jr., Cleveland, Ohio.
Dr. Clyde Hartwell Ward, Ann Arbor, Mich.
Dr. Benjamin Boisseau Weisiger, III, Richmond.
Dr. George Coriolanus West, Danville.
Dr. Enoch W. White, Jr., Jane Lew, W. Va.
Dr. Charles Warren Whitmore, Salem.
Dr. James Dwight Whitt, Gate City.
Dr. Jean Ann Wilfong, Richmond.
Dr. Morton Callowhill Wilhelm, Seattle, Wash.
Dr. Mortimer Lee Williams, Roanoke.
Dr. Harold Edward Wilkins, Aylett.
Dr. David C. Wilson, Jr., Syracuse, N. Y.
Dr. Alfred Yager, Englewood, N. J.
Dr. Walter Kinstler Yates, Kenova, W. Va.

THROUGH RECIPROCITY

Dr. John McLauchlin Adams, Winchester.
Dr. Edgar Baron, Kecoughtan.
Dr. Stephen Russell Bartlett, Jr., Richmond.
Dr. Harold Walter Bischoff, Falls Church.
Dr. James W. Bonds, Dante.
Dr. Alfred B. Brotman, Richmond.
Dr. John Robert Clark, Jr., Martinsville.
Dr. Daniel Lawrence Doherty, Jr., Roanoke.
Dr. William Nelson Eddy, Auburn, N. Y.
Dr. Harold Yishy Finck, Washington, D. C.
Dr. Charles O. Finne, Jr., Roanoke.
Dr. Walter Thomas Flaherty, Louisville, Ky.
Dr. John Franklin, Norfolk.
Dr. Landon Greene Gant, Alexandria.
Dr. Benjamin Golden, Washington, D. C.
Dr. Harold Jackson Gordon, Arlington.
Dr. Eugene Rudulph Grether, Alexandria.
Dr. Winston C. Hall, Ann Arbor, Mich.
Dr. William L. Harris, Falls Church.
Dr. Clarence R. Hartman, Falls Church.
Dr. Cecil Starke Hassell, Miami, Fla.
Dr. John Preston Jenkins, Richmond.
Dr. Amos Eldrich Johns, Remington.
Dr. Marvin Hayne Kendrick, New York, N. Y.
Dr. Anastasia Kraf, Winchester.
Dr. Persis Marti Kroutil, Alexandria.
Dr. Harry Buyer LaFavre, Virginia Beach.
Dr. Jack Louis Levine, Falls Church.
Dr. Sally Steele MacDonald, Washington, D. C.
Dr. Lewis Keith Madison, Warrenton.
Dr. John Phillip McGovern, Richmond.
Dr. George I. Meyer, Roanoke.
Dr. Robert J. Murphy, Jr., Roanoke.
Dr. John Oliver Nester, Arlington.
Dr. Ward E. Newcomer, Republic, Pa.
Dr. Ralph L. Nicholson, Arlington.
Dr. Harry Nushan, Hampton.
Dr. David Charles O'Brien, Portsmouth.
Dr. Merle Elmer Pickett, Roanoke.
Dr. Justin Plummer, Roanoke.
Dr. Roy R. Powell, Simons Island, Ga.
Dr. Paul Rawiszer, Wise.
Dr. Marvin Medford Satterfield, Roanoke.
Dr. George Arthur Shawkey, Charleston, W. Va.
Dr. John L. Shipley, Elizabeth City, N. C.
Dr. Arthur I. Sims, Arlington.
Dr. William Eidson Smith, Richmond.
Dr. Francis S. Springall, Gloucester.
Dr. Joseph William Still, Arcola.
Dr. Hugh Gregorie Stokes, Jr., Williamsburg.
Dr. Alden Wood Squires, Norfolk.
Dr. Walter Clark Tilden, Lancaster County.
Dr. Clarence J. Weimer, Philadelphia, Pa.
Dr. Ferdinand Welebir, Washington, D. C.
Dr. Ralph David Whitley, Washington, D. C.
Dr. Lorenz E. Zimmerman, Washington, D. C.
Dr. Francis T. Zinn, Norfolk.

The Virginia Society for Pathology and Laboratory Medicine

Held its semi-annual meeting at the University Hospital in Charlottesville on May 9, Dr. M. Beecroft, of Newport News presiding. The following were unanimously elected to membership: Dr. H. S. Breyfogle, Richmond; Dr. L. S. Kau, Winchester; Dr. J. D. Kernodle, Alexandria; Dr. J. R. Kriz, Richmond; Dr. T. J. Moran, Danville; Dr. P. S. Sahyoun, Richmond; Dr. G. Z. Williams, Richmond.

The meeting was attended by 34 members and guests and the following papers were presented:

Dr. T. J. Moran, Danville: Relapsing febrile nonsuppurative panniculitis (report of a case treated with penicillin).

Dr. A. A. Kirk, Richmond (by invitation): Three cases of thymic carcinoma.

Dr. H. S. Breyfogle, Richmond: The new law on post mortem examinations.

Dr. G. Z. Williams, Richmond: The application of the insurance principle to laboratory costs.

Dr. W. Grossmann, Charlottesville (by invitation): A case of congenital toxoplasmosis.

Dr. J. B. Cash, Charlottesville: A case of Kala Azar.

Dr. F. P. Parker and Dr. J. W. Eversole, Charlottesville: A case of disseminate torula infection with leukemia like blood picture.

Dr. M. L. Dreyfuss, Clifton Forge, is Secretary-treasurer.

The Smyth County Medical Society.

Held its monthly meeting on July 16, at the Grill at Hungry Mother State Park. Present were sixteen members and their ladies.

A committee was appointed, consisting of Dr. D. C. Boatwright, chairman, Dr. Willis Sprinkle and Dr. J. R. Blalock, to write a resolution on the death of Dr. J. M. Graybeal. It was suggested that a copy of this be sent to the Medical Society of Virginia for publication in the VIRGINIA MEDICAL MONTHLY.

Dr. J. M. Rogers gave a very interesting talk on the practice of medicine in Korea.

RESOLUTION

BE IT RESOLVED that the Smyth County Medical Society wishes to express to the family of Dr. J. M. Graybeal their deepest sympathy in their great loss.

That the Medical Society, Marion, and Smyth County have lost a valuable and sincere citizen who, while he spent his earlier years in the west, came back to Southwestern Virginia and settled down in the practice of eye, ear, nose, and throat.

That a copy of this resolution be made a part of the minutes of this meeting and be sent to the Medical Society of Virginia for publication in the VIRGINIA MEDICAL MONTHLY.

D. C. BOATWRIGHT
WILLIS SPRINKLE
J. R. BLALOCK
Committee

NEWS

100th Meeting, Medical Society of Virginia.

The Medical Society of Virginia, first organized the latter part of 1820, has lived with intermissions through several wars. This year in Roanoke will be held its 100th meeting, under the presidency of Dr. William L. Powell of that city. An interesting program has been arranged which includes papers on a variety of subjects, scientific and technical exhibits, and social features.

On Monday evening, October 13th, following the presidential address, Dr. Wyndham B. Blanton, one of the foremost historians of the Society, will talk on "1820—the Virginia Doctor and His Times." Dr. Richard H. Shryock, Philadelphia, a consulting editor of the *Journal of the History of Medicine and Allied Sciences,* will speak on "The Progress of American Medicine During the Past Century." Concluding the evening's program will be a birthday party.

Guests on Tuesday will be Dr. W. Halsey Barker, internist of Baltimore, and Dr. Frederick A. Coller, surgeon of Ann Arbor, Michigan. The Guest Speaker at the Wednesday morning session will be Frank E. Smith, Director of Associated Medical Care Plans of the American Medical Association.

The Medical College of Virginia Alumni Association will have its annual dinner meeting on Monday evening; special societies will have luncheon meetings on Tuesday as has been their custom; and a cocktail party, followed by a banquet and entertainment will be on Tuesday evening.

Mark the dates on your calendar now and plan to be in Roanoke, October 13, 14 and 15.

Post-Graduate Course in Ophthalmology and Otolaryngology.

The Virginia Society of Ophthalmology and Otolaryngology will hold its annual post-graduate course in the Baruch Auditorium, Medical College of Virginia, November 10, 11, 12 and 13.

The following physicians will speak by invitation: Dr. Harvey B. Haag, Medical College of Virginia; Dr. Harry P. Schenck, University of Pennsylvania; Dr. Chas. D. Blassingame, University of Tennessee; Dr. Francis E. LeJeune, Tulane University; Dr. Julius Lempert, Institute of Otology; and Dr. C.

Stewart Nash, University of Rochester. Also Dr. Alfred Cowan, University of Pennsylvania; Dr. Louis H. Clerf, Jefferson Medical College; Dr. Donald Lyle, University of Cincinnati; Dr. Walter S. Atkinson, New York, and Dr. Bruce Fralick, University of Michigan.

The first two days will be devoted to Otolaryngology and the last two days to Ophthalmology. Hotel reservations should be made through Mr. L. K. Baber, chairman of hotel arrangements, John Marshall Hotel, Richmond. For additional information, address E. Trible Gatewood, M.D., Professional Building, Richmond, Virginia.

Married.

Dr. Mason Smith and Miss Eudora Ramsay Richardson, both of Richmond, August 30th. He is a graduate in medicine of the University of Virginia in 1940 and has recently located in Richmond for practice after service in the Navy.

Mr. Tillman Miller Hepler, Christiansburg, and Miss Margaret Ellen Carter, Covington, June 26th. Mrs. Hepler is the daughter of Dr. Benjamin Lewis Carter.

Johnston Willis Hospital to enlarge.

This Richmond hospital is being enlarged to add 85 beds to its present capacity of 150. The addition will take in the present nurses' home, a four story structure, and an apartment house adjacent to the hospital property has been purchased for the nurses. Included in the new unit will be an operating pavilion, obstetrical department, and private rooms.

Mental Clinics to be Opened.

Dr. Joseph E. Barrett, State Commissioner of Mental Hygiene, has announced that seven mental hygiene clinics will be opened in Virginia with the aid of a federal grant. They will be located at Richmond, Newport News, Alexandria, Fairfax, Danville, Roanoke, and Lynchburg. These clinics will provide mental service to patients on furlough from State hospitals and will cooperate with social agencies, courts and physicians. All patients treated must be referred by physicians or agencies.

Dr. Maynard R. Emlaw,

Richmond, announces removal of his office to 211 West Grace Street, this city.

Medical Motion Pictures

Are available on a loan basis from the American Medical Association to medical societies, medical schools, hospitals and other scientific groups. Requests should be instituted as far in advance as possible, so that proper reservations may be made. Exact shipping addresses and dates should be given at time of request. Responsibility for the projection and care of the film must be borne by the individual or organization borrowing it. The Association does not have projectors available for loan. The borrower has to pay transportation charges both ways. The films include a number on anesthesia, physical medicine and a variety of subjects.

Requests should be sent to Secretary, Committee on Medical Motion Films, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

Dr. Arthur Klein,

Richmond, announces the opening of his new office at 1016 West Franklin Street, this city. His practice is limited to internal medicine.

Dr. C. G. Bennett,

After practicing for fifteen years in Tazewell County, has located in Martinsville, with offices in the Shackelford Building.

Instructional Course in Allergy

The American College of Allergists has announced that its annual Fall Graduate Instructional Course in Allergy will be given in Cincinnati, Ohio, November 3-8 inclusive, under the auspices of the Medical College of the University of Cincinnati.

The program this year is the best ever offered by the College. Forty-six formal lectures are listed and also a special allergy clinic of case presentations. An added feature this year will be three informal discussion groups which will be led by various members of the faculty.

The faculty is composed of more than forty outstanding physicians and scientists from prominent medical centers and colleges in the United States and Canada. The course presents a comprehensive study of the entire field of allergy—covering the fundamentals, special allergies, specific diseases, and all modern methods of treatment. Symposiums on dermatologic and pediatric allergy are also included, as

well as a survey of the laboratory approach to the subject including preparation and standardization of extracts and skin testing.

The course is recommended to all those especially interested in allergy, and to the general practitioner and specialist who anticipates treating his own allergic patients.

Programs and complete information can be obtained by writing to the College Secretary, Dr. Fred W. Wittich, 423 La Salle Medical Building, Minneapolis 2, Minnesota.

Drs. Groseclose and Pearce.

Dr. Eugene S. Groseclose announces the association of Dr. Leroy S. Pearce in the practice of obstetrics and gynecology, with offices in Allied Arts Bldg., Lynchburg. Dr. Pearce recently completed a residency in this branch at the Medical College of Virginia Hospitals.

Annual Summer Clinics

The second session of the fifth annual summer clinics was held in Raiford Memorial Hospital on July 30th, with a large attendance. Dr. Charles M. Caravati, Director of Continuation Education of the Medical College of Virginia, discussed some medical aspects of Clinical Jaundice, and Dr. Harry Warthen, Associate Professor of Surgery, talked on Surgical Diseases of the Biliary Tract.

Many conditions of liver and gallbladder diseases were vividly illustrated by slides and x-ray views and there was a free discussion of all phases of the subjects presented. It was generally expressed by all present that this was one of the best meetings ever held in this institution.

The third and last session of the 1947 summer clinics were held on August 27. Dr. Waverly R. Payne of Newport News discussed Office Gynecology and Dr. Ernest T. Trice of Richmond, Early Ambulation of surgical and medical cases.

Seminar On the Progress of Physical Medicine.

The New York Polyclinic Medical School and Hospital, the pioneer postgraduate Medical institution in the United States, announces plans for a Seminar on the progress of Physical Medicine, on December 1st, 2nd and 3rd.

Members of the Faculty and invited guests will give talks and demonstrations on the progress in methods, clinical application, and in related fields, especially medical rehabilitation. The Seminar will be conducted by Dr. Richard Kovacs, Professor of Physical Medicine, and his staff. The preliminary program can be obtained by writing to the New York Polyclinic Medical School and Hospital, 345 West 50th Street, New York 19, N. Y.

Dr. Carol M. Rice

Has returned to Sweet Briar College, Sweet Briar, after having been with the Department of Student Health of the University of Wisconsin, Madison, for the past year.

Annual Spring Graduate Course.

The Gill Memorial Eye, Ear and Throat Hospital, Roanoke, announces the following guest speakers for its twenty-first annual Spring Graduate Course to be held April 5-10, 1948: Professor Adalbert Fuchs, Shanghai, China; Dr. Conrad Berens, New York City; Dr. A. D. Ruedermann, Detroit; Dr. Edwin B. Dunphy, Boston; Dr. Trygve Gundersen, Boston; Dr. John M. McLean, New York City; Dr. Alston Callahan, Birmingham; and Dr. Donald J. Lyles, Cincinnati.

Mid-Winter Meeting of House of Delegates of A. M. A.

Cleveland has been selected as the place for the mid-winter meeting of the House of Delegates of the American Medical Association. The dates are January 5th and 6th, and this will be followed by a general scientific session for the general practitioner on the 7th and 8th.

Dr. H. Bryan Hutt

Announces the opening of his offiice at 42 West Midlothian Boulevard, Youngstown, Ohio, with his practice limited to infants and children. He was formerly located in Alexandria and has been taking special work in Cleveland since his return from the Service.

Dr. William H. Kaufman,

Announces the opening of his office at 820 South Jefferson Street, Roanoke, for the practice of dermatology and syphilology. He was formerly resident and instructor in dermatology and syphilology at the University of Virginia Hospital. Dr. Kaufman

graduated from Duke University in 1937 and was in the Service from 1941 through 1945.

Resolutions Upon Retirement From Board of Medical Examiners of Drs. Boyd and Smith.

Again, at this time, it becomes our sad duty to say goodbye not only to two of our Board's most valued members, but also to two gentlemen, who in their official capacity for many years have been outstanding in the faithful and efficient performance of every duty and obligation placed upon them by the State of Virginia.

We are losing both our President, Dr. P. W. Boyd and Vice-President, Dr. F. H. Smith, and with them we lose much more than their guiding influence and their deep insight into the workings of the Board; we lose also their delightful friendship and the stimulation of their characters and personalities.

It is with the deepest appreciation of their memorable services on the State Board of Medical Examiners that we offer our felicitations and best wishes for the future.

We move that these resolutions be spread upon the minutes of the Board and a copy sent to the Virginia Medical Monthly for publication.

W. B. MCILWAINE, M.D.
R. D. BATES, M.D.
Committee.

Director, Division of Mouth Hygiene.

State Health Commissioner L. J. Roper announces that Dr. George A. Nevitt, of Louisville, Kentucky, will serve as director of the Division of Mouth Hygiene of the State Health Department, on loan from the U. S. Public Health Service, to fill the vacancy left by the death of Dr. N. Talley Ballou.

Dr. Nevitt has practiced in Louisville, and became dental director of the Kentucky health department in 1937. In the recent war he served for a time as dental consultant for UNRRA in Europe and the Middle East.

In announcing the appointment, Dr. Roper said plans are being made for more emphasis on dental hygiene, now that the wartime shortage of civilian dentists is lessening.

New Books

The following is a list of recent additions to the Library of the Medical College of Virginia, Richmond, which are available to our readers under usual library rules:

Advances in internal medicine. Vol. II.
Advances in pediatrics. Vol. II.
Amidon *et al*—Good food and nutrition.
Dejerine and Gauckler—The psychoneuroses and their treatment of psychotherapy.
Duncan—Diseases of metabolism. 2nd ed., 1947.
Ewerhardt—Therapeutic exercise.
Hall—Diseases transmitted from animal to man.
Hyman—An integrated practice of medicine. 5 vols.
Kugelmass—Clinical pediatrics. 1947 ed.
Moore—Penicillin in syphilis.
Samuels—Peripheral vascular diseases. 2nd ed., 1947.
Sherman—Foods: Their value and management.
Szent-Gyorgyi—Chemistry of muscular contraction.
Thompson—Yearbook of endocrinology, metabolism and nutrition.
Transactions of the American Association for the study of goiter—1942-1946.
University of Colorado—Rocky Mountain conference on infantile paralysis.
Wolf and Wolff—Human gastric function. 1947 ed.

Clinical Director, Eastern State Hospital.

Dr. Barrett, State Commissioner of Mental Hygiene and Hospitals, announces that Dr. Isaac C. East has joined the staff of Eastern State Hospital at Williamsburg as Clinical Director. Dr. East, a native of Mississippi, is a vetrean of World War II, and was formerly with the Department of Institutions of New Jersey, and has been connected with that States mental hygiene clinics and with its juvenile courts.

Wanted.

The State Department of Health needs a large number of *graduate* nurses, both white and colored, in various capacities, salaries for those in Public Health ranging from $2,160.00 to $3,033.60 a year, and those at Sanatoria from $1,764.00 to $3,242.40 with maintenance.

Practical and *Student* nurses and nurse *aides* are needed also.

For details, write the State Health Commissioner, Dr. L. J. Roper, State Office Building, Richmond 19. *(Adv.)*

OBITUARIES

Dr. Claude Bernard Bowyer,

President of the Medical Society of Virginia for the year 1943-1944, died at his apartment in Stonega on July the 29th, aged 66 years. Although he had not been in good health for several months, his death was unexpected and was believed due to a heart attack. He graduated from the Medical College of Virginia in 1906 and shortly thereafter located at Stonega where he was connected with the Stonega Coke and Coal Company of which he soon became medical director, a position he held for a number of years. He had always taken an active part in the work of the Medical Society, serving for several terms as a councilor and on important committees. He was a member of the Board of Visitors of the Medical College of Virginia, member of the Board of Trustees of Emory and Henry College, a director of the First National Bank of Appalachia, one of the organizers of the Clinch Valley Medical Society, and also of the Lonesome Pine Country Club near Norton (and its president for the past fifteen years), and a leader in civic affairs of his section. His burial was near his old home at Emory.

Dr. Bowyer was unmarried but is survived by two sisters and two brothers, Dr. Thomas Bowyer of Baltimore and Dr. Clarence Bowyer of Chicago.

Dr. Walter Ashby Plecker,

Organizer and head of the Bureau of Vital Statistics of the State Health Department for thirty-four years, died August 2nd of injuries received when he was knocked down by an automobile. He was a native of Augusta County and eighty-six years of age. Dr. Plecker received his medical degree from the University of Maryland in 1885 and practiced as a country doctor for about twenty-five years. In 1912 he organized and became director of the State Bureau of Vital Statistics, a post which he held until his retirement last year. Dr. Pleecker had been a member of the Medical Society of Virginia for fifty-six years.

Dr. Tiffany Johns Williams,

Professor of obstetrics and gynecology at the University of Virginia, died August 19th following a heart attack. He was a native of Marylad and forty-nine years of age. Dr. Williams graduated from Johns Hopkins University Medical School in 1923 and, after practicing his specialty in several places, came to the University of Virginia from Great Falls, Montana, in the Fall of 1931. He had been an active member of the Medical Society of Virginia for the past fifteen years, having served as chairman and a member of the Committee on Maternal Health for a number of years, His wife and three three children survive him.

Dr. James Henry Ferguson,

Oldest practicing physician of Fairfax County, died at his home near Clifton on August 1st. He was eighty years of age and a graduate of the Medical College of Virginia in 1890. Dr. Ferguson practiced in the mountains of West Virginia until 1913 when he moved to Clifton. He had been a member of the Medical Society of Virginia for thirty-one years. Two sons and four daughters survive him.

Dr. Clyde Fenton Ross,

Well-known Richmond Urologist, died August 3rd. He was sixty-four years of age and graduated from the Medical College of Virginia in 1905. Dr. Ross served as Captain in the Medical Corps in World War I. He was professor of clinical urology and an associate clinical professor of dermatology and syphilology at the Medical College of Virginia, and was at one time venereal disease control officer for the City of Richmond. Dr. Ross had been a member of the Medical Society of Virginia for many years. His wife and a son survive him.

Dr. Algernon Stubblefield Vaiden

Died at his home in Monterey, August 1st, following a heart attack. He was sixty years of age and a graduate of the College of Medicine, University of Virginia, in 1911. Two daughters survive him.



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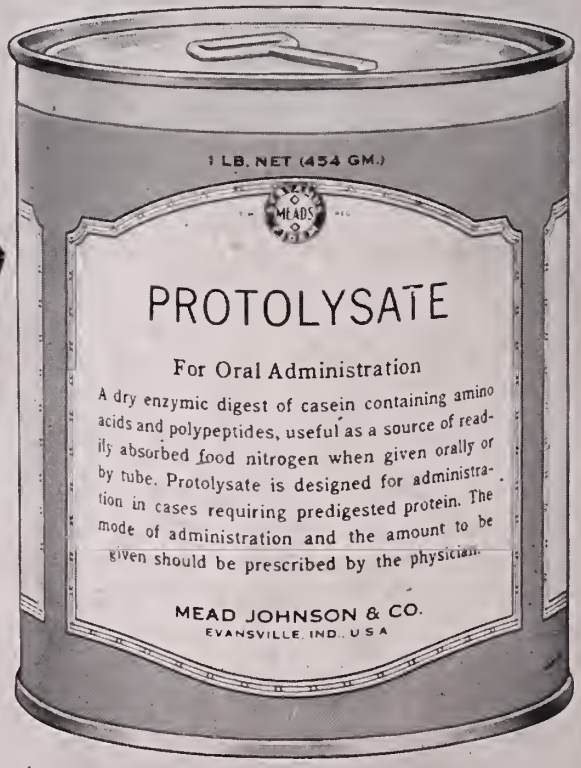
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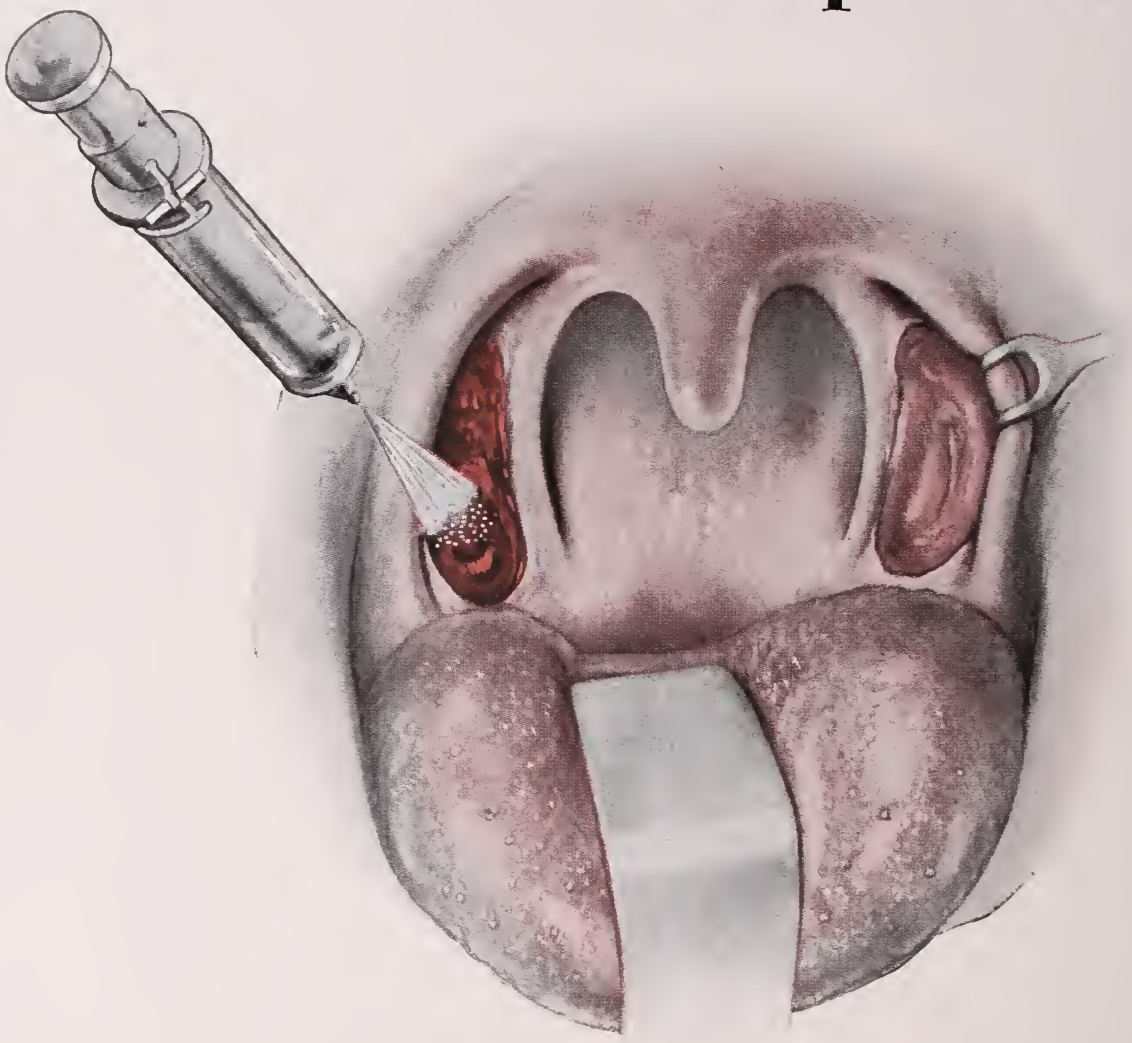
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Annual Meeting
Medical Society of Virginia
Roanoke, October 13-15, 1947

October, 1947

SYMBOLS OF SIGNIFICANCE

Thrombin Topical



Virginia Medical Monthly

Vol. 74, No. 10.
WHOLE No. 1144.

RICHMOND, VA., OCTOBER, 1947

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INFECTIOUS HEPATITIS*

M. Morris Pinckney, M.D.,
James O. Burke, Jr., M.D.,
W. Taliaferro Thompson, M.D.,
and
H. St. George Tucker, M.D.,
Richmond, Virginia.

Infectious hepatitis is a systemic infectious disease, with or without jaundice, caused by a virus gaining entry to the body usually through the gastrointestinal tract and demonstrating an especial affinity for involvement of the parenchymal cells of the liver. Hepatitis has occurred frequently in epidemic form in military history, having been prevalent in the American Civil War, in British troops in the Near East during the first World War, and especially virulently in the recent war in the Mediterranean Theatre. Mild epidemics and isolated cases, particularly in children, occur during peacetime in civilian communities. This has been known as catarrhal jaundice, synonymous with infectious hepatitis.

Epidemiologically, infectious hepatitis belongs to the group of enteric diseases spread by the ingestion of water or food or by fingers contaminated by virus containing feces. Therefore, protection of society demands strict observance of sanitation requirements as in the typhoid-dysentery diseases. It is well to bear in mind that the virus has also been transmitted to healthy persons by the use of unclean syringes and needles which had been used to draw blood from a hepatitis patient, for the virus has been recovered from the blood stream of hepatitis cases in the pre-icteric phase. Also, in hospitals, there is the possibility of transmitting the virus by employing contaminated enema tubes.

In the Mediterranean Theatre, marked seasonal variations in the incidence of the disease were noted —the peak of illness in both American and British forces occurring in the autumn and early winter.

*Read at the meeting of the Medical Society of Virginia at Virginia Beach, October 14-16, 1946.

Following an incubation period estimated to vary from approximately 2 to 4 weeks, the onset of the disease in most cases is indistinguishable from many other acute infections, with chilliness, low grade but occasionally high fever, general malaise and headache, anorexia which is often a prominent symptom, nausea, vomiting, and sometimes diarrhea. Many cases, however, complain of only mild and relatively vague symptoms, such as easy fatiguability, mental depression, anorexia, and discomfort in the abdomen. At this time, a blood count usually shows a leukopenia with lymphocytosis. This, the prodromal period, in the majority of cases lasts from 2 to 5 days and is notable for the paucity of physical findings. At this period, however, there are often palpable lymph glands, especially in the neck, and the liver is usually tender to fist percussion though not palpable. These symptoms often subside within a few days though the anorexia and dyspeptic complaints usually persist into what is termed the interval period. During this time the liver may enlarge and become tender, and clinical jaundice in the majority of cases becomes evident within a few days to 2 weeks of the onset of symptoms.

With the onset of jaundice, there is a transient rise in temperature, with a recurrence of previous symptoms, especially anorexia, nausea, abdominal pain, headache, lassitude and prostration. In addition to the presence of jaundice, examination reveals tenderness and variable enlargement of the liver, tenderness in the right costo-vertebral angle, adenopathy, and enlargement of the spleen in 15 to 20 per cent of the cases.

The icterus index usually rises rapidly, averaging

perhaps 50 to 75 units, and not infrequently exceeding 200. The jaundice subsides slowly, however, over a period of 3 to 4 weeks, or more. In general the higher the icterus, the longer the duration of disease.

The diagnosis of hepatitis with jaundice in the icteric phase is simple, but it is important to remember that hepatitis without jaundice may occur, which is in every way the same disease except that jaundice is undetected or absent. These cases are frequently difficult diagnostic problems, and it is essential to bear in mind the sequence of symptoms listed above in order to be on the lookout for such instances. Not infrequently the sole complaint will be lassitude or easy fatiguability, anorexia and abdominal heaviness or pain in the region of the liver, and almost without exception these symptoms will be definitely aggravated by exertion or jolting in a vehicle, and eased by rest. Again, we find tenderness to fist percussion over the liver, frequently enlargement of the liver after exercise and abnormal liver function tests.

Laboratory tests, both for diagnostic and prognostic purposes, were freely done on our more than 1,200 cases of hepatitis. It is of course universally recognized that no single test provides complete information concerning liver function at all times. The icterus index was always employed to demonstrate the degree of bilirubinemia, and occasionally the quantitative Van den Bergh was used as a check. In the absence of jaundice, whether in the pre-icteric phase or after the recession of icterus in the convalescent period, or in hepatitis without jaundice, we strongly believe that the bromsulphthalein dye test offers the most reliable laboratory evidence of hepatic dysfunction.

The cephalin-cholesterol flocculation test of Hanger and the blood alkaline serum phosphatase determination were abnormal early in the disease in approximately three-fourths of our cases, while the former remained positive (or abnormal) in a large proportion even when we considered the patients cured. However, neither test is specific for hepatitis, being abnormal in malaria, syphilis, and many other infections.

The erythrocyte sedimentation rate was of no real value, being normal throughout the course of the disease more frequently than abnormal.

Other tests less frequently done were total and fractional blood proteins, prothrombin time, hippuric acid and galactose tolerance tests, and Graham-Cole cholecystograms. Significant lowering of the total proteins or elevation of the globulin fraction was occasionally seen in severe and long standing hepatitis. Significant prolongation of the prothrombin time, though not frequently observed is always indicative of severe hepatitis, and may be found in fulminating cases early in the disease.

While all these tests are helpful in ascertaining some particular liver function, we do not feel that all cases of hepatitis must be so illuminated. Where one is concerned with the severity of the disease, or in doubt regarding the diagnosis, it is well to do some or all of the tests mentioned several times. In the ordinary case of hepatitis with jaundice, laboratory confirmation of the diagnosis is unnecessary during the period of jaundice. The bromsulphthalein dye test is the most reliable laboratory index of the status of recovery of the liver after jaundice has subsided.

The essentials of treatment may be simply stated: first and foremost, rest in bed; second, a high protein, high carbohydrate, low fat diet. Rest in bed is of paramount importance, and should be continued through the duration of the jaundice and until all evidence of infection, both clinical and laboratory, has disappeared. In average cases this will mean confinement for 3 to 5 weeks. We are firmly convinced that the one most important cause of relapse or delayed recovery is inadequate rest in bed.

The second essential is proper diet. Large series of cases present incontrovertible evidence that protein is as essential as carbohydrate for the protection and repair of the liver. An adequate diet for an adult should consist of about 200 grams of protein, 400 grams of carbohydrate, and 40 to 50 grams of fat daily. This diet is well tolerated and enjoyed by patients who were formerly nauseated and anorexic.

When persistent vomiting is present, protein, carbohydrates, and fluids should be administered intravenously. We injected 1 or 2 units of blood plasma for each meal missed and in addition gave 500 c.c. of 10 per cent glucose in normal saline to supply carbohydrates and fluids. Salt retention edema must be watched for. In desperately ill patients manifesting severe liver failure or with hemorrhagic manifestations, whole blood transfu-

sions are of value.

Symptomatic treatment of dyspepsia and abdominal cramps may be provided by belladonna, carminatives, and alkalies by mouth. Morphine or barbiturates should be used with extreme caution.

A word may be timely regarding prophylactic measures other than those relating to sanitation. Considerable evidence has accumulated indicating that human gamma globulin, given intramuscularly in a dose of 5 to 10 c.c., offers protection to exposed individuals. Its use might be indicated in institutions where an epidemic appears imminent. There is little evidence, however, that the course of hepatitis once established is altered by gamma globulin.

One of the most vexing problems in the management of a case of hepatitis centers upon a choice of standards to be met before the patient is allowed to become ambulatory, and other standards to be fulfilled before he can be considered cured. Unnecessarily prolonged bed rest tends to make of the patient an economic and family burden, and not infrequently engenders neurotic patterns in the patient. On the other hand, inadequate bed rest and too speedy return to normal activities opens the way for relapse and prolonged invalidism. Briefly, the following criteria seem to us to justify the termination of bed rest: normal or near normal icterus index, slight or no tenderness of the liver to fist percussion, return of liver to normal size, a return of a feeling of well being to the patient.

The criteria of final cure are predicated upon the response of the patient to graduated exercise, for the experiences of many thousands of cases of hepatitis in the Mediterranean Theatre indisputably prove that exercise will produce a relapse in the uncured or activate a latent sub-clinical state. The following criteria of cure have been suggested, to be applied after 1 or 2 weeks of graduated exercises: a feeling of regained health, ability to tolerate an ordinary or fatty diet, absence of enlargement of the liver after exercise, absence of tenderness of the liver, a normal bromsulphthalein dye test.

The mortality of infectious hepatitis is quite low, and is generally stated to be around one or two per thousand. There were two deaths in our 1,200 patients with hepatitis. These patients showed a rapidly mounting jaundice accompanied by marked apathy progressing to the coma typical of acute liver failure. Autopsies on these patients showed complete degeneration of the liver parenchyma. In such fulminating cases, the patient apparently dies of liver failure before there is time for regeneration of the liver cells. Even in the most fulminating cases, however, hope should not be abandoned. Occasionally the patient can be tided over the period of acute liver failure by the heroic administration of whole blood, plasma, and glucose. Two of our patients remained comatose for 6 and 12 days but eventually made complete recoveries.

While the mortality rate of infectious hepatitis is low, the morbidity may be great. The most serious problem that we encountered was that of incomplete cure. In spite of the most careful treatment of the acute stage of the disease, about 10 per cent of patients may continue to show continuing activity of hepatitis for a year or longer. The percentage may be higher in those patients who have not received an adequate period of bed rest. For purposes of classification, the term "chronic hepatitis" has been applied to those patients who show evidence of activity of the infection lasting more than three months. The state of chronicity may become apparent in different ways. Jaundice may subside but enlargement of the liver and abnormal liver function tests persist. Or, after apparent recovery, when activity is resumed, the liver may again become enlarged and tender, and symptoms recur. Many patients are seen who present the picture of chronic hepatitis without any history of an acute episode with jaundice.

In these types of patients, the picture of chronic hepatitis is much the same. The symptoms complained of are lassitude, mental depression, fatiguability, weight loss or failure to regain weight previously lost, soreness or sharp pains in the right upper quadrant made worse by jolting, anorexia, and various gastro-intestinal complaints. On physical examination the only positive finding is that of an enlarged tender liver. Jaundice is usually absent but may develop in severe relapse or exacerbation of the infection.

In this stage, the bromsulphthalein excretion test is the most useful laboratory aid. An abnormal result confirms the diagnosis of chronic hepatitis. But activity of the infection may persist even in the presence of a normal bromsulphthalein excretion. The presence of an enlarged and tender liver, especially when precipitated by exercise, is of more

significance than any laboratory procedure.

It is frequently extremely difficult to differentiate between the symptoms of chronic hepatitis and those of psychoneurosis. Indeed, both factors may be present in the same individual. It is well to remember that in the long complaining patient with no other findings, a program of exercise may produce enlargement of the liver which indicates the correct diagnosis.

The treatment of chronic hepatitis differs in no way from that of acute hepatitis. Rest in bed is essential, together with a high protein, high carbohydrate, and low fat diet. The patient should be allowed up only when symptoms have subsided and the liver returned to normal size, and then he should be followed carefully through a period of increasing activity. The criteria of ultimate cure are the same as those outlined above for the acute stage of the disease.

DISCUSSION

DR. JOHN P. WILLIAMS, Richmond: Dr. Pinckney has covered the subject so adequately that there is very little for me to add except in a more or less philosophical and historical sense.

The troops in this theater, the North African and Mediterranean theaters of operation, were the American Army of Invasion of North Africa, the Fifth, and the British Eighth Army, the Desert Rats of Montgomery. Insofar as experience with hepatitis is concerned, the British beat us to the punch a little bit because they first took over territory from our enemies. Within a month after they occupied El Alamein, an epidemic of hepatitis broke out among the occupying troops. It spread in the Eighth Army and came across the desert with them. Our troops were not exposed to it until the fighting around Hill 609. Then followed the collapse of the German Army and the taking of large numbers of German and Italian prisoners and it was our turn.

The first that we in the 45th General Hospital saw of hepatitis, except a sporadic case, was in September 1943 when *seventeen* of them came down from Oran when the hospitals in that medical center were being emptied in preparation for the Sicilian invasion. Everybody that could be moved was put on trains and sent back, and among them we got our small and unimpressive group. In December we moved into Naples and into the midst of the epidemic. At that time, we knew nothing in the world about hepatitis except what little we had learned from seeing an occasional case of catarrhal jaundice and a fair number of mild postvaccinial cases at Camp Lee. We just mixed them up with the other medical patients and fed them C rations.

During our first month in Italy, our armies were fighting hard from the Volturno River on northward to the Rapido and Casino. Casualties were high and hospital beds scarce, so our orders were to evacuate to North Africa all transportable cases who would not be ready for full duty within 30 days.

As the numbers of hepatitis cases increased, they began to be a real burden. But it seemed a shame to send them all the way back to Africa since after the first week or ten days, they appeared superficially to be more yellow than sick. So in our inexperience, we set up convalescent hospitals in tents for these "yellow" soldiers with very few professional personnel and no special treatment. From these they were shunted quickly back to the front as soon as they were able to walk about, and frequently before jaundice had completely subsided.

The Fifth Army went us one better. They felt that even our inadequate therapy, based more on the survival of the fittest than medical science, was unnecessarily elaborate for so simple and harmless a disease, and robbed them of man-power they sorely needed. So they set up their own large convalescent unit in the zone of combat to keep these patients out of our hands. They were hospitalized only during the acute phase and then sent to duty. This unit alone handled more than 2,000 cases of hepatitis before we began to realize what was happening.

Throughout the rest of the winter, after the epidemic season had passed and on through the summer, we received many cases of chronic, subacute, and recurrent hepatitis who had had inadequate initial treatment, and about 25 per cent of them had to be sent home as a consequence. This group in the summer of 1944 made up more than 90 per cent of all of our Z1 evacuees with this condition.

It also began to be recognized by the Fifth Army that most of the men, returned after inadequate treatment, were unfit for fighting and had to be kept in piddling rear area jobs. In other words, they had men on the roles who had to be taken care of but could not fight. The British were having the same experience, so finally MTOUSA stepped in and appointed Col. M. Herbert Barker, Associate Professor of Medicine, Northwestern University, and Chief of the Medical Service of their unit, as head of a Hepatitis Commission to conduct clinical research and coordinate all efforts in the control and therapy of this condition. He was given the widest authority, even to the point of authorizing 1½ pounds of top grade beef per day for each hepatitis patient at a time when there was hardly enough such meat for the generals.

While we organized in preparation for the next epidemic season, important information was coming from America. The causative organism had been proved to a filterable virus and by feeding filtrates of hepatitis stools to volunteers, the common source of spread and portal of entry had been shown to be the gastro-intestinal tract; in other words, it was a true enteric disease and not spray borne through the respiratory tract as previously suspected.

Of course, we had known all along that the disease could be transmitted by hypodermic and intravenous injections, but this was emphasized by the frequency of the occurrence of jaundice after multiple transfusions. This also emphasized the frequency of subclinical hepatitis or hepatitis without jaundice since donors frequently did not realize that they were sick.

I recall vividly a case which might be worth telling. A sergeant in a neighboring hospital, who was one of their best athletes, donated a pint of blood for a critically ill surgical patient in the morning, pitched a 10-inning baseball game against us and won it 2 to 1 in the afternoon, and the following morning reported to sick call with fever, nausea, vomiting, diarrhea, and mild jaundice. The course of his disease was fulminant and he died on the fifth day. The recipient of the sergeant's blood was kept under the closest scrutiny during the ensuing days. Everybody tiptoed around his bed expecting the arrival of the grim reaper momentarily. On the 19th day after his transfusion, he began to feel bad and by the 25th day was jaundiced. The course of his disease was mild and he made a complete recovery.

Special mention should be made of the meticulous care with which Dr. Pinckney organized his Hepatitis Section. It was obvious that if diet was to be an important factor in influencing the course of the disease, the food had to be acceptable, eaten, and retained. To insure this, a special diet kitchen was set up for this section and the cooks and helpers were so well indoctrinated as to their importance in the general scheme that they made regular visits to the ward to find out whether the food was being prepared in a way that the men liked, and were really depressed when any considerable amount was returned to the kitchen uneaten. Since beef was the most important source of protein, it was prepared with special care, rare, medium, and done so as to tempt the most fickle appetite.

In addition to this, the best medical nurses were assigned here; those who were proficient at the art as well as the science of nursing, and they accomplished an amazing bit of group psychiatry. The sickest of the patients were literally hand fed and it was no small feat to coax food into a rebellious stomach and persuade a miserably sick nauseated patient to hold on to it.

All this effort paid good dividends in results which were definitely the best in the Mediterranean Theater. Ninety-seven and five-tenths per cent of all admissions were returned to full duty and what was even more important, these men were actually ready for duty, having gained weight at a rate of 2½ pounds per week or a total gain of 15 pounds or more for the average six weeks of hospitalization. The last two weeks of this time were spent in the Convalescent Section on general hospital diet while undergoing the exercise tolerance test which he has described. These results become more striking when compared with a control group treated on general hospital diet at another hospital for a 90-day period. At the end of this time, not one man was ready for duty and in most instances, there had been little or no gain in weight.

The magnitude of the hepatitis problem may be better appreciated if it is realized that there were 38,000 such cases taken care of in the P.B.S. hospitals during the epidemic of 1944-45, and that during the peak of the epidemic more than 1,000 cases were brought into the Naples hospitals in one big day.

There is one other effect of the high protein feeding which should be noted. At first we avoided surgical procedures on these jaundiced patients, but occasionally it was necessary to do skin grafts and the surgeons noted with great regularity that the "donor area" from which the grafts were taken healed in about one-half the time of other patients on general hospital diet.

Though this is undoubtedly an enteric disease, the incidence of infection among our hospital personnel was relatively low. Even with our heavy patient load, there were only eight cases among us. On the other hand, I have seen a laboratory technician, a nurse, and a doctor contract the disease on our Paraplegic Section at McGuire Veterans Administration Hospital during the past few months while no infections have occurred in the Contagious Section where there are always four or five of these cases. The significance of this is obvious since most of the paraplegics have neither bowel nor bladder control and a certain amount of soiling and contamination of bed clothing and pajamas is inevitable.

I do not believe that as civilian doctors working in a more or less sanitary environment, we will ever see large epidemics of this disease and that only when sanitation breaks down under the stresses and strains of war are conditions such that this disease may become a real scourge.

I want to thank the essayists again for inviting me to discuss this excellent paper and to express again my congratulations on their unsurpassed results.

THE CARE AND TREATMENT OF THE MENTALLY ILL IN VIRGINIA—PAST, PRESENT, AND FUTURE*

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The history of the care and treatment of the mentally ill by Virginia is long and noteworthy. It is not strange that the ideology and practices of colonial days were strongly influenced by the ideologies and practices prevalent in Europe; so that, prior to the Revolution of 1776, which dissolved the relations between the parish vestries and the state, the custody of the pauper insane and the relief of the poor in Virginia belonged to the vestries of the Established Church, which was the Church of England.

It is probable that the care exercised by the vestries was similar to that exercised in other colonies by corresponding boards or township organizations. Doubtless the dependent insane were classed as paupers and regarded as especial objects of charity. It is evident that the colony soon felt the burden of these dependents. In 1769 the House of Burgesses passed an Act entitled, "An Act to Make Provision for the Support, Maintenance of Idiots, Lunatics and Other Persons of Unsound Mind."

The year before (1768) "The Publick Hospital for Persons of Insane and Disordered Minds" had been incorporated and, as a result of the 1769 Act, its construction and opening was hastened. This institution, now known as Eastern State Hospital, Williamsburg, Virginia, was opened on October 12, 1773. It is the oldest hospital in America to be used exclusively for the care of the mentally ill.

In the laws of Virginia are found from time to time further Acts relating to the "Publick Hospital"; An Act in 1776 continues the former Act for one year; an Act in 1778 revises the former Act and allows 25 pounds sterling in addition annually for each patient. Nothing is said about the amount of the previous allowance.

An Act of 1779 continues the former Act and appropriates 50 pounds additional per patient. The institution soon became crowded and by 1790 it was necessary to make additions to the existing building.

From the beginning "free persons of color" were admitted to the Eastern State Hospital on the same terms as the whites, and it thus became the first hospital in America to care for the colored insane.

On January 22, 1825, the Legislature began to make provisions for the erecting of a second hospital near the town of Staunton, in Augusta County. This hospital was completed and opened for the reception of patients on July 25, 1828. It was designed to relieve the overcrowding at Williamsburg and to take care of patients from that portion of Virginia along the eastern foothills of the Blue Ridge and west of that range of mountains. It is now known as the Western State Hospital, Staunton, Virginia.

On the 22nd of March, 1858, the General Assembly made provision for the establishment of a third hospital to be located west of the Alleghany Mountains, and to be known as "The Lunatic Asylum West of the Alleghany Mountains." Weston was selected as the site and the first building was occupied on September 9, 1859, by the transfer of 9 patients from Columbus, Ohio, where they had been maintained by Virginia, pending the construction of the new institution. The completion of the institution was halted by the Civil War but it was completed later by the new state of West Virginia in which it is located. It is now the Weston State Hospital, Weston, West Virginia.

In 1869 a temporary asylum was established for insane Negroes at Howard Grove near Richmond. This was the first asylum in America to be devoted to the care of Negro insane exclusively. Later (1882) arrangements were made for a permanent asylum at Petersburg. It is now known as the Central State Hospital, Petersburg, Virginia.

By 1883 and 1884 the crowded conditions of the asylums at Williamsburg and Staunton caused many of the insane of the state to be kept in jails

*Read before the Southwestern Virginia Medical Society, May 1, 1947.

and almshouses. In 1884 the Legislature made provision for the establishment of a fourth institution. The site selected was at Marion, Virginia, and this institution was completed and opened for the reception of patients on February 12, 1887. It is now known as the Southwestern State Hospital, Marion, Virginia.

The fifth institution to be established was the Lynchburg State Colony, at Lynchburg, Virginia. It was opened May 16, 1911, and is for the care and training of white feeble-minded and the treatment of epilepties.

In 1932 the DeJarnette State Sanatorium was opened at Staunton, Virginia. It is for the treatment of voluntary pay patients, suffering from mental disease, alcoholism, or drug addiction.

Previous to 1937 the colored feeble-minded were admitted exclusively to the Central State Hospital, but in this year the Petersburg State Colony was established at Petersburg for the training and care of trainable colored mental defectives. This institution is as yet small and inadequate to meet the demands, so the Central State Hospital continues to admit some mental defectives.

In addition, there are separate departments in the Central State Hospital and the Southwestern State Hospital for the so-called criminal insane.

We see here a continuing program of expansion of housing facilities to the extent that there is now a rated capacity for 10,104 patients. As of March 31, 1947, there was a total in-patient population of 11,560, which is an overcrowding of 1,456, or 14.4 per cent.

So much for the development of physical housing facilities in the past. These, as last stated, are also the present facilities, and it is obvious that a sizable building program is needed to merely relieve the overcrowded buildings.

It might be well to consider something of the basic concepts on which the past program was developed. As might be expected, the history of the American people is, for the most part, a chapter in the larger story of the modern European peoples. This does not mean that American society merely imitated that of Britain or France or Germany, but, as a colonial folk, Americans naturally borrowed more than they contributed to the sum total of European culture. Americans, for example, shared in the witchcraft delusions, yet never were so completely victimized by this hysteria as were the peoples of France and Germany—historical hullabaloos about Salem to the contrary notwithstanding. In like manner, the establishment of "asylums" for mental cases in the United States was clearly inspired by similar developments abroad; yet this program became more extensive and possibly more significant than the parent movement over-seas.

We have noted that prior to 1776 the custody of the pauper insane and relief for the poor were largely the responsibilities of the parish vestries. The Reformation resulted in England in the closing of many small ecclesiastical institutions which had provided asylums for the sick and poor of all sorts. The whole problem of relief was consequently shifted from Church to State or private philanthropy. It was under these conditions that the Eastern State Hospital was opened in 1773. It was necessary to protect the community. The institution was placed under the supervision of a "keeper." Although provision was made for medical attention, this was at the call of the "keeper." It was not until 1841 that the Eastern State Hospital had a medical superintendent, although the Western State Hospital, opened in 1828, had one from the beginning.

It is a matter of pride to note that current conceptions as to the treatment of the insane did not control officers or directors of the Western Lunatic Asylum. In its report for the year 1839 the directors say in part as follows: "Much useful information has already been diffused among the people on this subject (insanity) and it is hoped that the day is not far distant when insanity will no longer be regarded as a crime which should banish its unfortunate victims from the light of day and consign them to ignominious imprisonment and chains, but as a misfortune which should entitle them to the strongest claims on the sympathy and humanity of their friends.

"It is equally important that the equally fallacious and mischievous idea that a lunatic asylum is an object of unmitigated horror and disgust in which clanking chains, straight jackets, distorted features and frantic violence are the most prominent objects, should give place to a more correct and rational view of the subject.

"While these notions prevail, it will be impossible to overcome the repugnance which the friends of the insane so naturally feel against placing them in our asylums."

How much progress have we made from that early date? An examination of the statutes relating to the hospitalization of the mentally ill reveals that, except in cases of voluntary admission, it is still necessary to go through a modified criminal procedure to get a mentally sick person admitted to a state hospital; viz: (1) a complaint must be made to a judge, trial justice, or justice of the peace; (2) a warrant of arrest must be issued; (3) a lunacy commission must be formed and a hearing and examination held; (4) an adjudication and commitment must be made; (5) the sheriff takes charge of the convicted person. Recent statutory enactments prohibit the sheriff from placing this person in jail with some exceptions.

The above procedure deprives a person of his civilian status which can only be restored by a certificate of recovery issued by the superintendent of a state hospital or by a judge of a court of record.

In 1944 a statute was enacted which permits commitment for observation on the certificate of one physician. This is an advance in thinking, but so far relatively little use is being made of this form of admission.

What is the situation which the patient meets when he gets into the hospital under these conditions?

Since the beginning of the war, the medical, nursing and attendant staffs have been depleted and have not to date been replenished. Of course, what a patient gets from any hospital is largely dependent on the type and number of the medical and nursing staffs. If the total number is inadequate, it usually means that the patient must get whatever benefit he can during his early days in the institution.

A cursory inspection of our several hospitals combined will give us some idea of the over-all picture. There are five institutions for the care and treatment of the mentally ill and two for the care and training of the mentally defective and epileptic. These seven institutions have a rated capacity of 10,104. In this rated capacity we are now housing 11,560 patients. This represents an overcrowding of 1,456, or 14.4 per cent.

But the item I would like to give most consideration is personnel, because it is the personnel of a hospital which establishes the level of treatment received.

On March 31, 1947, we had an allotment of 46 physicians. This is a ratio of one physician for each 251 patients; there were actually employed 20, which is a ratio of one to 578. We also had an allotment of 1,232 nurses and attendants. This is a ratio of one nurse or attendant to 19 patients per shift. There were actually employed 961, which is a ratio of one to 24. In my opinion this is inadequate to render the service to which each patient is entitled. It is true that the superintendent and staff at each hospital are endeavoring to carry on a rather ambitious program of treatment in keeping with the personnel available, and much good service is being rendered. An effort is being made to keep abreast of all the advances in therapy. This will continue with the hope that we may be able to approach an ideal when it can be said that we do have a well-rounded mental hygiene program in Virginia.

Such a program must be consummated around modern concepts and with the full support not only of the medical profession but of the public as well. Regardless of the fact that we have changed the names of our institutions from "Asylums" to "Hospitals," it is still necessary to add that necessary ingredient, namely, adequate qualified medical and nursing and attendant personnel, to make them the latter.

From an analysis of the foregoing it seems that major emphasis has been placed on increased housing facilities for the mentally ill and mentally defective. Another important item which may be useful in evaluating attitudes is the expenditures for maintenance and operation. It is rather difficult to evaluate pounds during the latter part of the eighteenth century in terms of money today, but more recent figures are quite illuminating in this respect.

It is fully recognized that great kindness can be shown the unfortunate without the use of money, but even the Good Samaritan put up some cash to accomplish his humane project for the man who fell among thieves. The variation in maintenance rates in different hospitals is never fully accounted for by difference of climate and its effect on consump-

tion of fuel and on the weight of bedding and garments. More important differences are in salaries and wages of employees.

Here are some interesting comparisons of expenditures:

Hospital	Expenditures			
	1870-71	1880-81	1922	1930	1942
Stockton State Hospital, California	$166.20	$150.86	$257.92	$257.53	$305.82
Mt. Pleasant State Hospital, Iowa	208.00	210.60	260.63	255.23	236.28
Western State Hospital, Kentucky	212.16	167.28	169.37	158.06	No Report
Worcester State Hospital, Massachusetts	208.52	184.42	324.35	368.65	415.48
Willard State Hospital, New York	104.00	169.52	322.13	424.68	444.89
Manhattan State Hospital, New York	101.92	90.03	334.10	380.99	507.40
Dayton State Hospital, Ohio	254.80	198.04	256.64	263.82	193.40
Eastern State Hospital, Virginia	299.52	175.19	221.65	205.35	215.87
Central State Hospital, Virginia	266.24	158.08	167.49	141.22	168.16

We, of course, are primarily interested in what we are doing in Virginia to meet this problem. A later figure than the ones cited above shows that in Virginia for the year ending June 30, 1946, we made a per capita expenditure of 291.70, or a daily per capita expenditure of $0.799, and this is still well below what was spent at Eastern State Hospital in 1870-71. I think one is justified in concluding that this is a fair estimate of an attitude toward this problem.

We now have a picture of the past and the present, but what of the future? Should we continue the present program of adding buildings to house more and more mentally sick people, or should we do something about the mental health of the people of Virginia?

Mental health is a relatively new term, but mental disease, commonly referred to as insanity, has been with us for a long time. "Insane," "insanity" are in my opinion terms which have no justifiable usage by physicans or others who are dealing, at either a diagnostic or therapeutic level, with persons who have mental illness. The terms "psychotic," "psychosis" or "mental illness" are preferable.

Mental health is a state of mind which places an individual or group of individuals in the most advantageous condition possible to utilize his or their mental capacities and abilities in such a way as to produce the maximum benefits to all and to create a general feeling of satisfaction and well being.

The promotion of mental health and the care and treatment of the mentally ill varies with our attitudes toward, or our viewpoints about, mental illness. In other words, our planning to meet the problem is governed largely by our concept of the problem.

At the present there are three fairly well defined concepts or viewpoints in Virginia:

1. An insane person is a menace and a nuisance and should be locked up where he can be conveniently confined. Along with this, many are of the opinion that once insane, always insane.

2. The so-called insane are mentally sick people and in need of treatment. On this viewpoint we base our contention that our institutions are hospitals; however, merely calling an institution a hospital does not make it so. For permanency and prolonged security and efficiency good buildings and equipment are necessary, but only recently both the Army and the Navy have very vividly shown that good hospitals can be conducted in tents, provided the necessary trained medical and nursing personnel are there. Our mental institutions are going to continue to actually be asylums until they are provided with adequate trained medical and nursing personnel and related personnel.

3. These patients in our hospitals were sick long before they entered the hospital and their communities helped to make them what they are. On the basis of this concept or viewpoint it is concluded that treatment should be begun before hospitalization becomes necessary.

I am going to assume that the latter two concepts are acceptable to the majority of the people in Virginia because the first is not tenable in the light of present knowledge regarding mental disease. The third viewpoint may not be as widely accepted as the second, but on the basis of these two we might enumerate some of the important psychiatric needs of a modern community.

1. Hospitalization and adequate care and treatment of prolonged severe psychiatric cases.

2. Adequate treatment for acute psychiatric cases needing hospitalization for a short period of time.

3. Treatment for the psychoneurotic patient. This is to a limited degree a matter of hospitalization, but is to a more extensive degree a matter of outpatient service.

4. The treatment of behavior problems in children and maladjustments in adults.

5. The care and training of cases of mental deficiency not suitable for acceptance into the special programs of the Department of Education.

6. Adequate care for the very low grade mental defective, who from a mental hygiene standpoint, should be cared for outside the home.

7. A program of assistance to physicians, teachers, social workers, and others in the community who are dealing with people in trouble so that they may more adequately appreciate the psychiatric problem involved and refer them, if necessary, to proper services.

Cognizance of these needs has recently been indicated by (1) the increased public interest in the plight of mental patients in our state hospitals, and (2) the passage of the National Mental Health Act and the Hospital Survey and Construction Act, all of which places the realization of the above needs in the realm of possiblity. Whether this possibility is realized or not, depends upon (1) our ability to overcome a great deal of apathy, hopelessness, and tradition in the handling of the mentally disordered; (2) a full acceptance, instead of a mere tacit approval, of a program of prevention, early and intensive treatment and follow-up care, and (3) our ability to develop a cooperative relationship between the communities, other governmental agencies, and the private professional and lay organizations.

So long as our state mental hospitals continue to be operated as communities in themselves, isolated geographically and scientifically; so long as they continue to be ward or hospital centered instead of being focused on the whole community; so long as they continue to handle social problems in a palliative or custodial manner as though these problems exist apart from other social problems, and so long as they remain isolated from the beginning of mental illnesses and from the later lives of those who have recovered, we can only expect hospital populations to continue to climb.

Under the present type of program we are continuously being faced with requests for additional buildings for housing more patients who are mentally sick. This type of program commits us to a never-ending process of constructing more buildings. This approach fails to recognize the fact that patients are not cured by buildings. Patients can only be cured by trained people. This can be done in tents, barns, or crowded wards if there are enough trained people to spend enough time with each patient.

It seems obvious that if we are to cope with this ever-increasing problem, we must adopt a comprehensive program based on fundamental principles; viz: (1) That prevention is preferable to treatment; (2) That early and intensive treatment is preferable to custodial care; (3) That home care is oftentimes preferable to unnecessarily prolonged hospitalization for selected cases.

Such a program is medically sound because a preventive program will reduce the number of persons seeking hospitalization. Most every patient who enters a mental hospital has a long psychiatric history before admission. It is highly probable that a year of hospital care is the result of several years of psychiatric neglect, and it is highly probable that except for this neglect no hospitalization would have been necessary.

Early and intensive treatment will reduce the number of human end-products of mental disease. This statement is practically axiomatic in that the prognosis is much more favorable if any type of disease can be treated early and before some of the symptoms of chronicity have developed.

I do not want to conclude this paper without saying a word about research. On May 16, 1894, Dr. S. Weir Mitchell delivered an extraordinary address to the American Medico-Psychological Association (now the American Psychiatric Association). At the age of sixty-four Dr. Mitchell was a commanding figure in American medicine as a neurologist and literary artist. On this occasion of the fiftieth anniversary of the American Psychiatric Association his blistering chastisement of the organized psychiatrists is well worth noting. He said: "Once we spoke of asylums with respect; it is not so now. We, neurologists, think you have fallen behind us, and this opinion is gaining ground outside our own ranks, and is, in part at least, your own fault. . . . Where are your careful scientific reports? You live alone, uncriticized, unquestioned, out of the healthy

conflicts of honest rivalries which keep us (neurologists) up to the mark of the fullest possible competence."

In spite of the enormous amounts that are being spent annually for the care and maintenance of the mentally ill, less than one per cent is being allotted to organized research into the causes and improved methods of treatment of these many disorders. No organization should be more interested than the State in trying to find the answers. It is anticipated that this type of approach is to be developed in Virginia in the not distant future.

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2. One Hundred Years of American Psychiatry: Columbia University Press, 1944.
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New Books

The following are among the new books recently received by the Library of the Medical College of Virginia. They are available to our readers under usual library regulations:

Allison—Proteins and protein hydrolysates in nutrition.
A. M. A.—New and nonofficial remedies—1947.
A. M. A.—Reports of the council on pharmacy and chemistry.
Barcroft—Researches in prenatal life.
Beverley—Psychology of growth.
Chittenden—Living with children.
Commonwealth Fund—Hospital care in the United States.
Count—Brain and body weight in man: their antecedents in growth and evolution.
Edwards—Concise anatomy.
Feibleman—The theory of human culture.
Fishbein—A history of the American Medical Association.
Granich—Aphasia, a guide to retraining.
Jordan—Educational psychology.
Ponder *et al.*—Some aspects of red cell production and destruction.
Potter—Rh, its relation to congenital hemologic reaction.
Rieniets and Broders—Gastric adenomas: A pathologic study.
Sandow *et al.*—Muscular contraction.
Treiger—Atlas of cardiovascular diseases.
Venable and Stuck—The internal fixation of fractures.
Watson—Outlines of internal medicine.

Grants for Scientific Research.

The American Allergy Fund announces the availability of grants in aid for research to be made to investigators in the biological sciences, both medical and non-medical, whose problems meet the requirements of the Scientific Advisory Council. Preference will be given problems with immediate relationship to allergy, although investigations in physiology, biochemistry, pharmacology, immunology, genetics and other basic sciences are solicited. Grants will be made for one year in amounts not to exceed $3500.00, and may be renewed from year to year if the progress report warrants continuation.

Applications should contain the following information: 1. Statement of specific research problems and an outline of the method or methods of procedure to be followed. 2. Description of research facilities in the institution where investigator will employ the grant. 3. A tentative budget. 4. Statement of the applicant's research record, accompanied, if possible, by publications or reprints.

Applications (seven copies) should be addressed to the American Allergy Fund, 525 Erie Building, Cleveland 15, Ohio, attention: Scientific Council.

SCLERODERMA WITH UNUSUAL CENTRAL NERVOUS SYSTEM MANIFESTATIONS

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The voluminous literature on the subject readily attests to the fact that the disease scleroderma has an unusual appeal for the discerning medical man. It is a disease which has been diagnosed and carefully described for centuries, and yet the etiology remains obscure, the entire clinical picture probably incomplete and the treatment enigmatic. Although world wide in distribution, it is a disease that a man of medicine will encounter only a few times in his career.

The disease was first described in 1634 by Zacutus Lusitanus, but it was not new to either Hippocrates or Galen. However, the term scleroderma was first used by Gintrac in 1842. As early as 1895, Lewin and Heller[1] reviewed the entire subject up to that date, collecting reports of more than five hundred cases from the literature including twelve new cases of their own.

References to the central nervous system have appeared in reports of the disease since the last century, but as far as the author can determine, only one previous case in which convulsions occurred has been reported. Josephowitch[2] described a case of unilateral scleroderma in a patient with Jacksonian epilepsy and concluded that the changes in the skin must be cerebral in origin. Because of its unusual central nervous system manifestations, the following case is reported.

REPORT OF CASE

R. S., a 39 year old white, male, soda fountain clerk, was first seen on March 20, 1946. He stated he had enjoyed good health all of his life until two years prior to admission when a prophylactic smallpox vaccination became secondarily infected, and he developed a cellulitis of the upper left arm. This apparently subsided satisfactorily with only local treatment in about one week. However, three weeks later he began to complain of burning pain and numbness and tingling in his left hand which was brought about by exposure to cold and associated at first with marked blanching of the skin of the hand and later followed by light purplish discoloration. He noted that these symptoms were promptly relieved by heat. About three weeks later the right hand became similarly involved and three months later both feet became involved simultaneously. Since that time the skin had gradually become more and more tight and shiny, and the hair over the affected parts had long since disappeared. During the past year he had noted progressive involvement of his face, and his family had commented on his lack of facial expression. The visible changes in the extremities had never progressed above the wrists and ankles, but since the onset he had complained of stiffness and soreness without swelling or redness in the shoulders, elbows, hips and knees, and, indeed, he had been treated by several physicians for arthritis. For the two weeks prior to admission, he had complained of daily throbbing left-sided headache, radiating from the occiput to the left frontal area, which on several occasions was associated with nausea and vomiting, producing temporary relief of headache. He also complained of general malaise, moderate weight loss and marked loss of appetite.

He had a mild cough productive of small amounts of mucoid sputum, and exertion dyspnea had been present for one month, but he denied paroxysmal nocturnal dyspnea, orthopnea, angina, and dependent edema. Nocturia was marked and there was a definite tendency toward reversal in the day-time night-time urinary output. He complained of slight dysphagia.

His past history was not remarkable. He had recovered from the usual childhood diseases without complications, and he had not had malaria, typhoid, rheumatic or scarlet fever, diphtheria, pleurisy or pneumonia. Both parents were dead in the seventh decade of "heart disease". Several siblings were living and well, and there was no family history of diabetes, tuberculosis, malignancy, kidney or liver disease, epilepsy, mental or nervous disorder.

Physical examination revealed a poorly developed and poorly nourished white male appearing chronically ill and considerably older than his stated age. The skin over the hands, feet and face was tightly stretched over the underlying bony prominences. It was thick, waxy and devoid of wrinkles and hair.

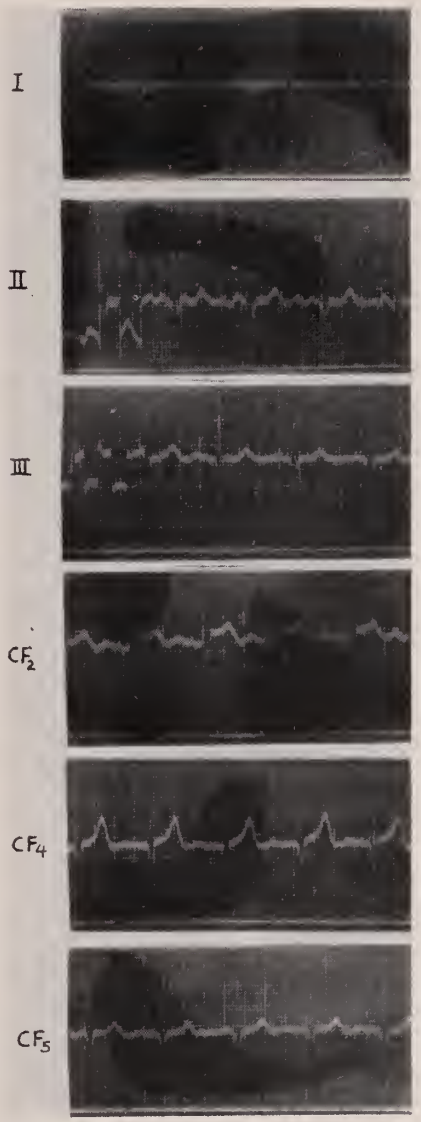
The face was mask-like and there was a complete lack of facial expression. The underlying facial muscles seemed to be atrophic and the skin was cold. There was a moderate tannish, diffuse pigmentation over the lower abdomen and upper chest and the skin was similarly waxy in these areas, thick and difficult to pick up.

The sclerae were clear and the conjunctivae somewhat pale. The pupils were equal, regular and reacted promptly through a normal range with slight hippus. The fundi revealed well outlined nerve heads and 2 plus retinal vascular disease (on basis of 1 to 4) with a v-nicking, but exudate or hemorrhage was not seen in either eye. The ears and nose were not remarkable. The tongue was normal, but the teeth were dirty and decayed and there was considerable gingival erosion. The pharynx was clean, and the peripheral lymph nodes were essentially negative. The trachea was in the mid line. There was no tug. The thyroid was not palpably enlarged.

The chest was resonant to percussion throughout and the breath sounds were vesicular everywhere. A few dry rales were present at both bases posteriorly. The heart was moderately enlarged to the left, the point of maximum impulse being 12 cm. from the midsternal line in the sixth interspace. The waistline was preserved and the aorta was perhaps slightly uncoiled but not dilated. The rate was 78; the rhythm was regular. There were no thrills or thrusts, and no murmurs, gallop, or friction rub were heard. The blood pressure was 180 mm. of mercury systolic, 115 diastolic in the right arm lying, 190 systolic, 115 diastolic in the left arm lying, and 200 systolic, 115 diastolic in both legs lying. The peripheral vessels were three plus thickened (basis 1-4) and showed early tortuosity. The venous pressure appeared normal clinically. The temporal, carotid, radial, and dorsalis pedis pulses were present and of equal volume bilaterally, but the posterior tibials could not be felt. The temporal vessels were easily seen but were not unusually prominent or tender.

The abdomen was scaphoid, soft and non-tender. No masses were felt and the liver, spleen and kidneys could not be palpated. There was no costovertebral angle tenderness, sacral edema or herniae. The genitalia were normal. Rectal examination showed a small external hemorrhoid, normal sphincter tone, and a firm, smooth, small, non-tender prostate.

The extremities showed scarring at the finger tips, although he denied previous ulceration. The fingers and toes were blunted and the nails slightly deformed. The hands blanched on raising them to the level of the heart and developed a light purplish cyanosis when they were allowed to hang at the sides for 15 minutes. When immersed in water at



15° for a few minutes, they became deadly white, but they developed a healthy pink color when the water was warmed to 45°.

Neurological examination revealed a normal station, gait and attitude. The cranial nerves were all tested individually and found to be intact. Motor power was equal and normal throughout. There

was no wandering of the extended arms. All deep and superficial reflexes were present, equal and showed an essentially normal response. The plantars were flexor and no pyramidal signs were elicited. Cerebellar signs were absent. Sensation to light touch, pin prick, temperature, position, stereognosis and vibration was appreciated normally throughout. Intelligence seemed to be average and he was well oriented in every way.

Laboratory studies revealed 3,360,000 erythrocytes. Hemoglobin (Sahli) was 11.5 gms. or 78 per cent. There were 11,850 leucocytes of which 60 per cent were segmented, 8 per cent bands, 29 per cent lymphocytes, 2 per cent monocytes and 1 per cent basophiles. The smear showed adequate platelets, slight anisocytosis with a tendency towards microcytes and a slight increase in central pallor. The urine was clear, pH 5.5, Sp. Gr. 1.010, heavy trace of albumin and no sugar. The sediment contained 1-2 erythrocytes, 2-3 leucocytes and an occasional hyalin cast in each high power field. The urine was sterile. A concentration test showed the ability of the kidney to concentrate up to 1.014. There was 20 per cent excretion of PSP in one hour. The blood urea was 19 mgs. per cent, cholesterol 80 mgs. per cent, calcium 12.5 mgs. per cent, and phosphorus 2.5 mgs. per cent. A Kahn precipitation test was negative. An electrocardiogram (Fig. I) was essentially normal except for elevation of the S-T segment in CF_2 and CF_4 and diaphasic TCF_2. Roentgenographic examination of the chest showed heavy vascular markings and slight fibrosis along the descending trunks in both lower lobes.

COURSE

Two days after admission, he had eight focal convulsions, starting first in the right face, then spreading to involve the right arm and leg and then becoming generalized. During the seizure, the eyes deviated upward and to the left, consciousness was lost, and loss of sphincter control occurred. During the twenty-four hours following these convulsions, there were typical focal signs on the right. The right face, arm and leg were weak, deep reflexes were hyperactive, and the Babinski, Gordon, Oppenheim and Chaddock were all strongly positive. There was a nominal aphasia and apparently considerable mental confusion. Lumbar puncture at this time released clear fluid under increased pressure (180 mm. H_2O) with no cells and a total protein of 60 mg. per cent. The Kahn and gold curve were negative. The blood pressure averaged 260 mm. mercury systolic, 150 mm. diastolic between and for several hours following the seizures. Mecholyl chloride* 2 mg. twice daily was instituted at this point, and the following day all neurological signs had disappeared. Motor power was equal bilaterally, pyramidal signs were absent, and his mental state was much brighter. Definite changes also occurred in the skin, particularly in the hands which became pink and warm. However, within the next two days, although no further convulsions occurred, he gradually began to deteriorate generally, urinary output rapidly decreased, the blood urea rapidly rose to 175 mg. per cent and he died quietly in coma seven days after admission. Autopsy was not permitted.

COMMENT

References to the involvement of the central nervous system above the cord level in scleroderma are rare, yet histologic changes in the central nervous system and spinal nerves have been described[3, 4, 5, 6]. Mayers[7] noted changes in the motor ganglion cells, cavities in the brain, and multiple nodular thickenings in the convolutions. In 25 autopsies he found one case each with cortical atrophy, congestion, adherent dura mater, gyrus induration, and focal areas of softening. Williams[6] studied the central nervous system of a patient with scleroderma carefully and found only dissociated deep reflexes. The jaw reflexes were extremely active, and the deep reflexes in the lower extremities were sluggish, but no focal signs were found and no other abnormalities referable to the central nervous system were noted. Reich[8] found some engorgement of the cerebral vessels but on serial section the brain appeared entirely normal. O'Leary and Nomland,[9] in presenting a clinical study of 103 cases of scleroderma, one of the largest single series in the literature, mention no symptoms referable to brain lesions. Murray[10] stated that spinal fluid lymphocytosis might occasionally be found with an associated increase in protein. Talbott *et al*[11] found the spinal fluid under normal pressure but noted a rise in the initial zone of the gold curve. Most references to the central nervous system have concerned themselves with the cord, the spinal nerves, and the sympathetic nervous system. Howell[12] found a report of degenerative changes in the cells of the intermedio-lateral tract from which sym-

*Acetyl-beta-methylcholine chloride, Merck.

pathetic fibers arise. He also noted atrophic degeneration of the motor cells of the anterior horn. Lesions about the ependyma also have been described. Weidmann,[13] in reporting a case of congenital scleroderma, found the gray matter of the anterior horns was granular, torn, irregularly vacuolated and apparently semifluid. The cells of both the anterior and posterior horns were badly degenerated and their cytoplasms disintegrated. They contained coarse blue granules, were generally without a nucleus and rarely showed a pale one. Steatfield,[14] Anderson,[15] Lion,[16] Bunch,[17] and Castle[18] have reported lesions following the course of the fifth cranial nerve.

The sympathetic nervous system, particularly in regard to the etiology of the disease, has attracted the attention of many investigators. Brown[19] and his associates have studied the factors of vasospasm on local disturbances in the capillary bed. They found a sharp diminution in the number of open capillaries per unit area of skin with the blood flow easily disturbed or slowed to a stop by lowering the temperature several degrees. Capillary loops were large, distorted and irregular, and their outlines were frayed and indistinct. Changes in the blood vessels are invariably present in scleroderma.[20] These changes consist for the most part of narrowing of the lumina of medium sized arteries by concentric layers of fibrous tissue in the intima. The internal elastica is often fragmented, and some fibrous replacement and hyalinization of the media occurs.

It is unfortunate that necropsy was not permitted in this case, but from the sudden onset and the pattern of his convulsions and the eventual clearing of post-convulsive signs, it is likely that the central nervous system lesion was vascular rather than primarily neurogenic in character. The headache of which he complained prior to the onset of convulsions was rather typical of migraine which is generally accepted as being vascular in origin, and the sudden rise in blood pressure associated with focal fits is not unlike the clinical picture of so-called hypertensive encephalopathy.

Summary and Conclusions

A case of generalized scleroderma with Jacksonian convulsions is presented. It is likely the central nervous system lesion was vascular rather than primarily neurogenic in origin. A brief review of the pertinent literature is also presented.

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MANAGEMENT OF CARDIAC FAILURE*

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I shall confine this discussion to congestive heart failure, and I need not define that term to this audience. However, a fairly clear conception of the mechanism of this disorder is an essential approach to successful therapy. The management of congestive failure does not involve the use of any particularly new remedies, but consists of the application of generally accepted principles and of well tried therapeutic agents.

The first of these is rest, with the idea of lessening the work the heart is called upon to do. This may be relative or absolute. In milder cases with dyspnea on effort, a careful scrutiny of the patients daily activities, with elimination of those that encroach upon reserve, may suffice. As the degree of congestion increases, the degree of rest must be increased up to the point of absolute rest in severe case. It is to be remembered that rest can be overdone and should be diminished, if possible, as failure improves.

Digitalis has been a useful agent in congestive failure for nearly two hundred years, but we are still not entirely clear as to its mode of action. However, we believe that it is practically always indicated, that its good effects depend upon a fairly full degree of saturation, and that an occasional dose is useless. Due to the work of Hatcher, Eggleston and others, we are able to estimate in the individual case about the amount of digitalis necessary for saturation. However, we must still observe, as William Withering did, the therapeutic effect on the one hand and the toxic effect on the other. Perhaps we have made some advance in recent years through the use of digitalis glucosides, which seem to be of real value. They are more completely absorbed from the digestive tract and may often be substituted advantageously when the whole leaf is ineffective. They also have the advantage of intravenous, intramuscular or subcutaneous use, where administration by mouth is difficult.

In severe congestive failure, our most dependable remedy is the mercurial diuretic. This has been in use for more than twenty years and has been steadily improved as to toxicity and effectiveness. Its combination with theophylline has been a distinct advance. It can be given intramuscularly or by rectum, or even in pills, but, by far, the most satisfactory method is the intravenous. I prefer a smaller dose, 1 cc. every day or so, to larger doses at less frequent intervals, but the dosage and interval should be worked out for the individual patient. The only contraindication of importance is renal failure, and this should not be confused with the renal involvements due to congestion. In most cases of congestive failure, the urine shows albumen and casts, and there is often a considerable increase in blood nitrogen, which diminishes after diuresis. Mercurials act better with ammonium salts, and these should be given when diuresis is slow without them. A good preparation is the enteric coated tablet of ammonium chloride, given in doses of three or four grams daily for a day or so before injections. Mercurial dieuretics may be continued indefinitely. I have known patients who have taken them every five to seven days for years with apparently no ill effects. Cases have been reported in which renal damage seemed to occur, but these instances are infrequent and should not disturb us in the use of this valuable agent when it is indicated.

All agree that in congestive failure the diet should be limited in bulk in order to lessen the circulatory load. For many years it has been customary also to limit fluid and salt. This goes back to Karell's observation in 1866 concerning the production of diuresis by a diet limited to a liter of milk daily. Up to recently, fluid intake was emphasized but it has now been shown rather conclusively that this is of no significance, but rather that the restriction of sodium is the factor that brings about diuresis. Indeed, the trend of opinion at present is in favor of increased, rather than decreased, fluid intake, provided that sodium in the diet can be restricted to a minimum. In practice, this is by no means easy, even in a hospital, as it involves meticulous care in the preparation of even simple foods like bread and butter, and also the exclusion of all medicines or other substances containing sodium. Nevertheless, I am convinced from experience that low sodium

*Remarks at the Symposium on Therapy, February 18-19, 1947, Medical College of Virginia, Richmond, Virginia.

intake is an important principle in controlling cardiac edema, and that fluid restriction is unnecessary.

Sedatives, narcotics and laxatives are necessary for the patient's general well-being, and, to this extent, are extremely useful in congestive failure. Nothing, in my opinion, takes the place of morphine where dyspnea is urgent, as in severe cardiac asthma. Oxygen is often helpful, and an experienced patient may find it most beneficial, particularly for nocturnal dyspnea. Coramine is a popular remedy, but I doubt that it has any useful effect; nor are the zanthines to be relied upon. Bleeding is rarely necessary, and mechanical procedures, such as bandaging the legs, are hardly worth the effort.

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OULD, SIR FIELDING (1710-89): A Treatise of Midwifery in Three Parts. Dublin. Oli Nelson, 1742, xxv-208 pages. Illustrated 19½ cm. (Miller Library).

Ould is credited with being the first to use episiotomy and of increasing our knowledge of the mechanism of labor. He must have been a disturbing influence in Dublin as the following bio-biographical note which was prepared by Dr. J. D. H. Widdess, Librarian, R. C. S. I. indicates (the Royal College of Surgeons of Ireland had a wonderful exhibition of old obstetrical works in connection with the recent international congress of Obstetrics and Gynecology) "According to Hastings Tweedy, this is the work of a very young man, without experience either theoretical or practical, anxious to impress others and attract to himself the practice he wished to have. It was severely criticized by a contemporary Dublin practitioner, Thomas Southwell, who accused him of plagiarism and ignorance. Despite such criticism, however, he was one of the first to make original observations on the mechanism of labor. He advised turning the child and extraction by the feet in cases of slight contraction of the pelvis."

"The College of Physicians who regarded the practice of midwifery as undignified, refused to examine Ould for their license, even though the authorities of Trinity College had granted him the degree of M. D., having made him B. A. by special grace. The latter act actually caused a break in the relations between the physicians and the School of Physic (Trinity College, Dublin) which lasted for many years. While the dispute was in progress, Ould was knighted by the Lord Lieutenant which gave rise to the epigram:

> Sir Fielding Ould is made a Knight
> He should have been a Lord by right
> And then each lady's prayer would be
> Oh Lord, good Lord, deliver me.

Ould is believed to have attended the Countess of Mornington at the birth of Arthur, late Duke of Wellington."

REPORT OF CASE OF TUMOR OF THE ILEO-CECAL JUNCTION: POSSIBLY DIVERTICULUM

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Mrs. T. R. G., a white woman, age 54 was admitted to the Retreat for the Sick December 3, 1940, with the following relevant history: Three weeks ago she was taken ill with pain in her lower right abdominal quadrant accompanied by nausea. This attack lasted three days and gradually wore off. Since this acute attack she has had indigestion constantly and there is a soreness in the right lower quadrant. The night before admission to the hospital the pains became more severe and she was nauseated and, in fact, had reduced her diet in order to avoid the nausea.

Examination at this time showed tenderness and some rigidity at McBurney's point. A diagnosis of appendicitis was made and the patient agreed to operation.

December 4, 1940: Under ether ethylene anesthesia a low right rectus incision was made. On opening the peritoneum a small amount of straw colored fluid escaped. The gall bladder was first palpated and visualized and appeared to be normal.



The ileo-cecal junction was then examined and a small hard tumor about the size of a lime was found (as illustrated in drawing No. I). The appendix did not appear to be the seat of an acute inflammatory process and as the tumor appeared to be acutely inflamed it was thought the primary pathology must be there. There was considerable inflammatory exudate around the tumor, though not of a purulent nature and it was partly covered by



adherent omentum. Not knowing whether this tumor was malignant and finding it so close to the ileo-cecal valve it was decided to remove the cecum, appendix and several inches of the ileum. A primary anastomosis was not thought safe on account of the active infection present. A Mikulicz type resection was therefore done. There was an uncomfortable convalescence due to infection, but recovery was satisfactory.

January 18, 1941: Under novocaine infiltration anesthesia closure of the intestinal fistula was accomplished.

The specimen is illustrated fairly accurately in the two drawings submitted. The first drawing illustrates the tumor before it was opened and as it looked to the operator at the time of the operation excepting the adhesions are not illustrated. The second drawing illustrates very well the tumor and ileo-cecal region opened. The pathologist, Dr. Regena Beck, could not say whether this would be classified as a diverticulum of the ileum at the ileo-cecal junction or whether it was some kind of in-

flammatory tumor surrounding a fecalith which had some way perforated the wall of the ileum. The report by Dr. Regena Beck, pathologist, follows: "Specimen consists of a small section of the ileum, ileo-cecal valve, appendix and cecum. External to the ileo-cecal valve area is a tumor mass approximately 5x3 cm. There is an ulcerated opening in the ileum at the ileo-cecal valve 5 mm. in diameter which leads to the center of the tumor mass. There is a fecalith in the center of the tumor mass which measures 13x7 mm. The tumor mass consists of subacute inflammatory tissue in adipose and fibrous tissue. There is no evidence of malignancy."

505 Professional Building.

Earlier Inoculation Against Whooping Cough.

Although 67 per cent of all deaths from whooping cough occur during the first year of life, many doctors believe that infants should not be inoculated until after the seventh month. This is because the ability of a newborn infant to form antibodies, the substances manufactured by the body cells to protect themselves against the serum, is supposed to be comparatively low.

Writing in the current *American Journal of Diseases of Children,* published by the American Medical Association, J. M. Adams, M. D., A. C. Kimball, Ph.D., and F. H. Adams, M.D., all of Minneapolis, present a somewhat different conclusion. It was reached after observing the response in a group of babies who were given three weekly whooping cough inoculations within the first month of life.

The authors, who are also members of the Division of Preventable Diseases of the Minnesota Department of Health, comment:

"The fact that the infant at seven months of age is able to respond to immunization better than the newly born infant is rather weak evidence for withholding the immunization past the age of greatest risk. In private practice withholding immunization until seven months may be warranted only if the infant can be protected from exposure by a controlled environment. However, in public health preventive programs an earlier period would seem desirable. Furthermore . . . nonimmunized persons in a group derive protection from existing in a well immunized population. Thus the few infants who fail to respond to the vaccine are indirectly protected."

Air Travel for Infants.

There is no danger in air travel for an infant under one year of age, states a medical consultant in answer to a query in *The Journal of the American Medical Association.*

Although there have been rumors that air travel is not well tolerated by infants, the consultant points out that a United Airlines survey conducted during 1941 and 1942 revealed that a healthy baby reacts better to flight conditions than most adults.

"An infant's ears adjust to altitude more easily than an adult's," the consultant explains, "probably because their eustachian tubes are short and straight.

"Airsickness is a rarity. There have been reports of vomiting, but this apparently is due to regurgitation of food when the infant is fed aloft. The gas expansion which takes place at altitude results in a regurgitation unless great care is taken to prevent the infant from swallowing air while being fed."

MEDICAL SOCIETY OF VIRGINIA

PUBLIC RELATIONS

Appreciation of Debate Material.

The subject of debate in approximately four hundred high schools in the winter and spring of 1947 was—socialized medicine.

In this connection we contacted the State Department of Education, the Division Superintendents, and principals of these schools, suggesting possible helpful debating materials. With their permission, literature was sent to all of them.

Their letter of July 2 on the subject is carried, herewith, and greatly appreciated.

MR. HENRY S. JOHNSON, *Director*
MEDICAL SOCIETY OF VIRGINIA
1200 EAST CLAY STREET
RICHMOND 19, VIRGINIA

DEAR HENRY:

The Executive Committee of the Virginia High School League has asked me to express, to the Medical Society of Virginia, through you, its appreciation for the Society's interest in the League's 1947 debate program, and its thanks for the informative materials which the Society prepared and distributed to our member schools on the debate topic: Socialized Medicine.

The materials were very helpful to our scholastic debate squads, and the League is most appreciative of your generosity in providing them. Regards and best wishes,

Sincerely,

RICHARD R. FLETCHER,
Executive Secretary
Virginia High School League

RRF:ew

CORRESPONDENCE

Penicillin for the Eyes of Newborn.

TO THE EDITOR:

It seems to me that the article* appearing on page 417 of the September issue entitled "Penicillin for the Eyes of Newborn" is a dangerous one. I do not believe that we know enough about topical use of penicillin as a preventive to justify substituting it for the time-honored silver salts.

At the annual section of Ophthalmology in 1947, AMA, the question was brought up at the business meeting and was over-whelmingly "viewed with alarm" and voted down by the attending members.

As you probably recall, about 20% of all blindness resulted from gonoccal infections of the eyes, at or shortly following birth, before the silver salts were used routinely. Ophthalmologic neonatorum in recent years has been quite rare.

I cannot believe that Dr. Franklin's conclusions as appeared in the abstract can carry any scientific weight since they are based upon reaction to the drug and not on bacteriologic studies.

Until further studies are made I do not believe any substitute should be made for silver nitrate unless one wishes to use silver acetate which is solvent in no greater strength than 1% and is somewhat less irritating than the nitrate.

ROBERT H. COURTNEY, M. D.

September 15, 1947
Richmond, Virginia.

*Abstract from article by H. Charles Franklin, M. D., Memphis, Tenn., in August 9th issue of the *Journal of the American Medical Association.*

Floral Eponym (55)

AVERRHOA

AVERROËS, 1126-1198

AVERROËS, a pupil of Avenzoar, was born in Cordova. He was more noted as a philospher and free thinker than as a physician. He attempted to found a school of medicine upon Aristotle's philosophy. His pantheistic doctrine led to his persecution.

Averrhoa is a small genus of tropical fruit trees, cultivated in India and China. They are sometimes grown under glass for ornament.

Medical Society of Virginia Cancer Committee

Chairman, GEORGE COOPER, JR., M. D.

Room 383, Medical School Building, University, Virginia

Reprints of this and preceding Bulletins may be obtained from this office

November 1, 1947

Lymphoblastoma

Lymphoblastomas, tumors composed of cells of the lymphocyte series, include Hodgkin's disease, lymphosarcoma, giant follicle lymphoma ("Brill-Symmers disease") and lymphogenous leukemia. Since the same structures in the body are involved in these different processes, the differential diagnosis cannot be made clinically and must be established by study of the blood, bone marrow or tissue biopsy.

The EARLIEST MANIFESTATION of the disease is usually relatively asymptomatic enlargement of one or more superficial lymph nodes, most often in the cervical region, but any node in the body may be the initial site. In some cases tenderness is present and the involved nodes vary in size spontaneously from day to day. If both cervical and axillary node enlargement is present, the mediastinum is usually involved. The group of patients in whom the disease is limited to the intra-abdominal or mediastinal nodes presents the most difficult problem in diagnosis.

Probably no diseases present more varied SYMPTOMATOLOGY, which may be that of mediastinal obstruction, invasion of the skeleton, or involvement of the gastro-intestinal tract. Undiagnosed fever, pruritis, anemia, splenomegaly are often due to one of the members of this group. Chills, sweats, or even parenchymatous infiltration seen on chest x-ray do not exclude them from consideration in diagnosis.

The DIAGNOSIS of Hodgkin's disease, lymphosarcoma, and giant follicle lymphoma must be made by biopsy. Usually lymphogenous leukemia can be recognized by study of smear of the peripheral blood but in some instances examination of a bone marrow preparation is necessary. Any of these preparations can be submitted to a competent laboratory for diagnosis if the physician desires. If a specimen of blood is sent for examination, several unstained smears should be submitted. To be satisfactory, *blood smears should be thin enough so that the erythrocytes about touch each other without signficant overlapping.* Marrow for examination generally is obtained from the center of the sternum at about the level of the third rib. To *obtain material with least dilution of peripheral blood, no more than* 0.2 cc. *should be withdrawn. The production of pain on aspiration of marrow into the syringe and the presence of fat droplets in the smear indicate that marrow has been obtained. It is important that marrow smears be as thin as blood smears.* A brief summary of the case, which includes hemoglobin determination, erythrocyte and leukocyte count, should accompany material submitted for diagnosis. That our diagnosis of these diseases can be improved is shown by the fact that the average duration of symptoms before diagnosis is about one year in chronic leukemia, eight months in Hodgkin's disease and lyphosarcoma, and two years in giant follicle lymphoma.

X-ray therapy is still the most useful form of TREATMENT. Although radioactive isotopes and nitrogen mustard produce a beneficial effect on many patients in this group, preparations so far tested do not offer a better prognosis. If the patient becomes refractory to x-ray, a trial with other therapy is justified because occasionally dramatic, if temporary, improvement occurs. Rarely the process appears confined to a single superficial area when surgical excision and irradiation is the treatment of choice. Close cooperation between radiologist and internist is essential in therapy. Periodic examination is an important part of the program since therapy is usually indicated when the tumor recurs or increases in size. As a rule patients with chronic lymphogenous leukemia are treated only when symptoms justify it, since markedly elevated leukocyte counts are not incompatible with a normal existence in many individuals. In the present state of our knowledge, treatment of acute leukemia must be considered as symptomatic or experimental, since none of the present methods produce significant improvement.

The PROGNOSIS is not good. The average duration of life after onset of symptoms is about 3.5 years for chronic lymphogenous leukemia, 2.5 years for Hodgkin's disease, 2.2 years in lymphosarcoma, and 6 years in giant follicle lymphoma. The 5 year survival with chronic lymphogenous leukemia and Hodgkin's disease is about 30%, with lymphosarcoma 20% and giant follicle lymphoma 50%. *But survival time is only one measure of the effect of treatment which, in this group of patients, is shown better by the increase in useful life and the relief of troublesome symptoms.*

PUBLIC HEALTH

L. J. ROPER, M. D.

State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for August 1947, as compared with the same month in 1946, and for the period of January through August, 1947, compared with the same period in 1946, is as follows:

	Aug. 1947	Aug. 1946	Jan.-Aug. 1947	Jan.-Aug. 1946
Typhoid and Paratyphoid	18	27	71	85
Diarrhea and Dysentery	551	525	3,625	2,125
Measles	112	130	7,439	12,831
Scarlet Fever	49	59	894	2,081
Diphtheria	11	31	156	292
Poliomyelitis	33	45	59	68
Meningitis	11	9	83	168
Undulant	8	9	52	42
Rocky Mountain Spotted Fever	14	28	54	77
Tularemia	6	7	39	45

COMMENTS CONCERNING SCARLET FEVER

A remarkable change has been observed since 1900 in the clinical picture of scarlet fever as compared with previous years. Formerly the disease in most cases was severe from its onset, frequently accompanied by serious toxic and septic complications, and carried case fatality rates of from 5% to 15%. Secondary attack rates were also higher than noted today; and this finding might well be expected, as severity, duration of illness and the frequency of open septic complications are considered. Morbidity and mortality statistics for Virginia during this period are available only in various scattered localities, but these demonstrate adequately the former importance of scarlet fever as a medical and public health problem.

The following tabulation shows the decline in both morbidity and mortality during the past 30 year period. It is confidently assumed that all fatalities from scarlet fever are caused by its complications and that reporting of the disease was comparatively uniform throughout the period.

SCARLET FEVER MORBIDITY AND MORTALITY—VIRGINIA 1917-1946

Ten-Year Periods	Average Annual Attack Rate Per 100,000 Population	Average Annual Mortality Rate Per 100,000 Population
1917-1926	105.0	1.5
1927-1936	115.3	1.4
1937-1946	77.2	0.4

An elevation in the attack rate is noted for the intermediate ten year period and no explanation of this is attempted. However, a 12.5% decline in incidence is evident as average annual cases of 1937-1946 are compared to 1917-1926. During the past 15 years public health facilities have been widely extended and specific therapy much improved through the use of biologicals, sulfonamides, and, to a limited extent, antibiotics. Over a period of years it may be reasonably expected that the beneficial effect of these and other factors should be evidenced by decrease in prevalence, severity and in fatality. A satisfactory decline in mortality of 1.1% is demonstrated and clinical experience clearly indicates material improvement in severity of illness. It is estimated that from 60% to 80% of cases may be classed as mild infections. In this type, typical signs and symptoms may be absent, or, are of such a degree as to make diagnosis difficult.

In conclusion, it appears appropriate to suggest a few words of caution. While the importance of scarlet fever has appreciably declined as a disease and cause of death, 9,936 cases and 34 deaths were reported in Virginia during the past 3 years. It is therefore essential that all recognized measures of control and treatment be closely followed if the disease is to be reduced to more satisfactory levels.

REPORTS FOR 1947 ANNUAL MEETING MEDICAL SOCIETY OF VIRGINIA

Executive Secretary-Treasurer

TO THE HOUSE OF DELEGATES:

During the past year, the Council held its regular winter meeting on January 16, 1947 (reported on pages 126-9, March, 1947, VIRGINIA MEDICAL MONTHLY), and an executive session on May 24th.

There has been an unusually large amount of correspondence and detail work in the executive office during the past year, due largely, we believe, to the return of doctors from Service and the addition of many who had not previously been members of the Society. A number of young doctors completing residencies and internships are asking for locations and it would be appreciated if members would notify this office when they learn of openings for the younger doctors.

The number of component societies remains at forty-eight, representing 91 counties and one city. Several of these with few doctors in the county exist only on paper, there not being a sufficient number to arrange for meetings.

The membership of the Society as of September 15th is 2,083, an increase of 27 over last year. There were more resignations than usual on account of the increase of dues, but 53 of these were continued on the list, upon their request, by taking advantage of the provision in the By-Laws for exemption from dues after reaching the age of 70. The changes are:

New Members	153	
Reinstatements	1	
		154
Deaths	44	
Resignations	49	
Lost or dropped for non-payment	34	
		127
Increase		27

The Society was represented in the two sessions of the House of Delegates of the American Medical Association by its duly elected delegates—Dr. J. Morrison Hutcheson and Dr. H. B. Mulholland. The secretary was in attendance at both of these, the first occurring at the time of the Conference of State Secretaries and Editors. Permission was granted her and the assistant secretary to attend the Atlantic City meeting of the A. M. A. at which time also occurred the first meeting of the Medical Society Executives Conference of which your secretary was a member of the Executive Committee. The secretary and assistant also attended the annual meeting of the Medical Society of the State of North Carolina which convened at Virginia Beach in May.

From nominations made by the Society, Governor Tuck appointed Dr. C. L. Riley, Dr. Carson L. Fifer, and Dr. G. B. Setzler of the 7th, 8th, and 9th Districts, respectively, to the State Board of Medical Examiners for terms of five years, and appointed Dr. K. D. Graves to fill the unexpired term of Dr. J. W. Preston, deceased.

Upon request of the American Medical Association, Dr. Powell appointed a special Committee on National Emergency Medical Service with Dr. J. Powell Williams as chairman. Others are: Drs. Guy Richardson, R. P. Bell, Jr., W. H. Chapman, Beverley F. Eckles, J. M. Hurt, and Frank A. Farmer.

It will be of interest to note from replies to the cards sent members of the Society during the summer that the percentage of general practitioners in the State was 43.3 per cent as compared with 56.7 per cent specialists. The ages of both groups ranged from twenty-six to eighty-six.

The Program Committee decided to have on display at this meeting photographs of the presidents of the Society. The executive office has secured the majority of these for the past hundred meetings and they are being shown among exhibits. Information as where photographs of the other presidents may be obtained will be appreciated.

During the year the Society has acquired six viewing boxes for use of the Committee on Scientific Exhibits, and it is hoped additional equipment may be secured later.

An audited report of the books of the Society will be presented the Council and appear with the minutes of this meeting. We may state, however, that the financial status is in excellent shape.

This office acknowledges with appreciation the cooperation of the officers, committees, and individual members in its work.

AGNES V. EDWARDS,
Executive Secretary-Treasurer.

Director of Public Relations

The following report is issued with the view that members of the medical profession are interested in some detailed aspects of our program and are interested generally in the activities of the Office of Public Relations for the past fiscal year.

I. THE OFFICE

The matter of personnel, facilities, and equipment has given us a great deal of concern. Miss Agnes V. Edwards, Executive Secretary of the Medical Society of Virginia, was kind in sharing a portion of their quarters until the last week in October, 1946, when we moved into the Board Room of the Richmond Academy of Medicine. Although all activities of the office for the past year have had to be carried on in one room, we are still hopeful that it may not be necessary for us to have other quarters at present. The Richmond Academy of Medicine has been considerate and generous in providing this space. The equipment purchased to date is limited to two desks, one typewriter, three file cabinets, one mimeograph machine, two chairs, and other minor items.

We have one full-time secretary, have had a part-time radio script and press consultant, and have used a little part-time help in commercial art. Our office needs both in personnel and equipment may not be predicted too accurately at this time, but it is obviously affected by the type of program we attempt.

II. WORK WITH THE LOCAL MEDICAL SOCIETIES

In addition to a regular notice in the VIRGINIA MEDICAL MONTHLY of our desire to meet with any medical society and any lay groups when an invitation was extended, we have written all component societies, not visited, at least twice, reminding them of our availability. As a result we have met with doctors for discussion of Public Relations work in approximately eighty-five counties and cities. We have talked to the staffs of several hospitals, been in four all day conferences, and helped arrange for two conferences for the members of the District Council of their respective Congressional Districts, lectured to the junior and senior medical students of the Medical College of Virginia, attended six State-wide conventions, not of a medical nature. In addition, we have attended three meetings of the Health Council, Virginia Cancer Foundation, and several legislative commission hearings on subjects bearing on health and medical care.

III. CONFERENCES OUTSIDE THE STATE

We have attended two Middle Atlantic Rural Health Conferences at Philadelphia and one all day conference on Public Relations of several southern cities in South Carolina. In addition we have participated in three conferences at A. M. A. headquarters and attended A. M. A. conventions for 1946 and 1947.

IV. SPECIFIC PROGRAMS

A. Public Relations Conference—December 19, 1946

It was the concensus of the Public Relations Committee that as soon as we were well enough along with a suggested program in Public Relations, we should call a State-wide conference on the subject, of representatives of respective medical societies in the State. This was done December 19, 1946. At this conference we listened to and discussed actual radio programs, suggested press releases, contact with educational institutions, what we might do in the promotion of Voluntary Prepayment Medical Care and Hospitalization, how we would propose to use the press and radio, the forum, etc., in implementing our program. Approximately sixty doctors and a dozen laymen participated in this conference.

B. Radio Programs

1. "Tell Me Doctor"

We arranged through visits to twelve radio stations for our program, "Tell me Doctor", a series of three minute transcriptions, to run five days a week from April 15 through July 25. This program was accepted by these radio stations and appears to have been well received by radio personnel, doctors, and the lay public.

2. "Your Health Reporter"

We also arranged for another program, "Your Health Reporter", for a period of one week, five minutes a day for four days and fifteen minutes on the fifth day for the week beginning Monday, August 4. This program was designed to inform the public and generally promote a better understanding of Pre-Payment Medical Care and Hospitalization. This program was also a public service.

3. "Dr. Mettauer"

Still another item of radio work was the development of script for the American Medical Association's nation-wide broadcast on Dr. John Peter Mettauer—a time consuming and painstaking procedure.

4. Work With Radio Stations

In discussing various types of radio programs and arranging for the necessary time, it was essential that we spend considerable time with radio personnel. The fact that we have been given so generously of their time is indicative of at least two things—first, the acceptability of the materials offered and second, an enviable relationship with radio stations. This procedure was perhaps one of the best ways for us to get an insight into the workings of radio and the use we might make of it in Medical Public Relations.

We have not purchased any time on the air over any radio station. The time that we have been given, if purchased at the regular commercial rate, would obviously have run into thousands of dollars. The acceptability of our radio programs, in itself, is not considered inconsequential.

5. Developing Scripts and Studying Outside Transcriptions

The office of Public Relations has, of necessity, spent a great deal of time in studying scripts, radio transcriptions, and other data bearing on arrangements with radio stations, types of programs, etc.

C. The Press

1. Virginia Press Association and Associated Press

Although time has not permitted us to contact all of the newspaper offices in the State, we have tried to work closely with, and through, the Virginia Press Association and the Associated Press and a number of editors for advice and other help. It is contemplated that we should endeavor to cultivate still more local press agents and press representatives. Members of the District Councils and other officers of local medical societies may be very effective in their work with local newspapers.

2. "Test Your Medical IQ"

After consulting a number of various types of health columns used in other states, we decided

to develop a question and answer type of health column called, "Test Your Medical IQ". We contacted approximately 125 newspapers, a good many of which are using it at the present time. Incidentally, we have not purchased any space in any newspaper.

D. Literature to Schools

In connection with the annual high school debate, the subject of which was "Socialized Medicine" in 1947, we secured permission from the State Department of Education to contact Division Superintendents and in turn high school Principals and furnish to every white high school sponsoring the debate materials on the subject that they had not secured from any other source. It is expected that the September issue of the VIRGINIA MEDICAL MONTHLY will carry a reference to and appreciation of this assistance by an organization of school officials.

E. Development of the Handbook

Although our Handbook on Public Relations may not be complete, we have made an effort to describe, for any interested person, certain impressions which we have in respect to the various phases of Public Relations. This is, of course, the type of thing that would be subject to development, constant revision, and further improvement. It is believed that the Handbook could be helpful to all doctors and that it should be studied particularly by the Councilor and members of the District Council. We need further suggestion that will lead to a still more useful Handbook.

F. "Medical Facts and Folklore"

It is believed that a great deal of education can be done through a type of thing we have been working on called "Medical Facts and Folklore". Although these are not ready for the newspapers, some work has been done in preparing for the press certain items bearing on superstitions, legendary stories, etc., that might encourage many people in the lay public to look to medical science instead of permitting themselves to be guided by practices and sayings that have no foundation. We feel certain that the respective medical societies, individual doctors, and lay people can contribute to a valuable volume on this subject and that it, in turn, can be one effective means in the education of our people.

G. Exhibit

We have had a number of requests to prepare an exhibit for various conventions and meetings. As anxious as we have been to do this, we are conscious of the importance of an exhibit being a creditable one. This takes time and effort, and we realize that it is not perfect but hope to further improve this and believe that members of the medical profession can give us essential suggestions.

H. Contact With The Medical Censorship Board

The Public Relations Committee, at the request of the Director of Public Relations, appointed a Medical Censorship Board to check anything we furnished to the public through the radio, press, or in any form of literature. This committee consisting of Dr. Wyndham Blanton, Dr. Carrington Williams, Dr. Morrison Hutcheson, Dr. L. J. Roper, and Dr. M. Pierce Rucker has been most helpful in advising us on the content and composition of the materials.

I. Work With The Legislative Committee

It is probably rather generally well known that it was contemplated that the Legislative Committee would have some important matters coming to its attention before the next Legislature. We have spent some time on this and met with the Legislative Committee in its joint meeting with the Council. We are also working with a Sub-Committee appointed at their last meeting.

J. Veterans Medical Care Program

The President of the Medical Society appointed in June, 1946, a committee to work on the Medical Care Program for Veterans. This committee has met a number of times in developing not only the fee schedule but working on the necessary arrangements between the Medical Society of Virginia and the Veterans Administration in setting-up this program. The Director of Public Relations has served as secretary of this committee. Perhaps a report by this committee will indicate some of the problems encountered and the time that has been devoted to this.

K. Lists of Doctors in Virginia

We have had so many requests for a list of doctors in the State that our office has been instructed to work on an up-to-date list of these. We combined the roster of the membership of the Medical Society of Virginia and the list of doctors provided by the State Health Department and wrote to commissioners of revenue in every county and municipality in the State with the view of compiling a master list of doctors to be checked by local medical societies with the hope of having, perhaps this fall or winter, a list of doctors for the State and also a list for each Congressional District. These could serve many useful purposes.

L. Lists of Members of the District Councils

We have been diligent in an effort to help in the naming of a member of the District Council from each medical society and from each county in the State in accordance with the By-Laws of our Constitution. With a few exceptions this is now complete.

M. Conferences of Members of the District Council

A number of Councilors have indicated their interest in a conference for members of the District Council in their Congressional Districts. Two of these have already been held—in the First and Second Congressional Districts. Others are being scheduled. These conferences, so far, have emphasized

(1) the role of the members of the District Council in a Public Relations program, (2) activities of the medical societies in a Public Relations program, and (3) the work of the office of Public Relations. Of course, a great many other items of general interest are brought into the picture and so far enthusiasm has been expressed over the value of such conferences.

N. Affiliation With The Richmond Public Relations Club

In addition to various contacts with other organizations, the Director holds membership in the Richmond Public Relations Club consisting of approximately twenty persons whose work is primarily Public Relations.

V. BUDGET MATTERS

As in any other office, finances enter into the picture. We have tried to predict how much money we would need and how it should be spent. The last report on our budget was carried in the 1946 December issue of the Journal. We are glad to state that we shall have a balance at the end of this fiscal year although there are reasons which could be explained in detail why we did not spend as much as we had anticipated in certain items. We have tried to guard the purse strings and hope that we shall not actually need more than our budget.

HENRY S. JOHNSON, *Director*

Delegates to the American Medical Association

The recent centennial meeting of the American Medical Association held in Atlantic City was unique in many respects. Because of this celebration, upwards of sixty visitors from foreign countries were present and introduced at various times to your House of Delegates. Noteworthy amongst these presentations was that of the British delegation who brought to the association a gavel and block made from the wood of a mulberry tree that grew in Tavistock Square, now the site of the home of the British Medical Association, but formerly the home of Charles Dickens. It is said that under this tree Dickens wrote many of his famous novels. The delegate from China presented quite a beautiful scroll which was embossed with Chinese letters and a tree symbolic of the development of medicine. Other countries, too, presented scrolls, medals and even ancient medical books. For this reason and the fact that there was much business to be transacted, the House of Delegates was in almost continuous session for four days. Hence, your delegates can only give you a clear picture of what went on within the walls of the Traymore Hotel. There was very little time to attend the scientific meetings and only a short time to look over the excellent scientific exhibits, which numbered over fifteen hundred and were better than ever before from hearsay and a short inspection.

As most of you know, Dr. Olin West, who had been elected to the presidency the year before, because of illness was unable to take up his duties, and Dr. E. L. Bortz of Pennsylvania, the vice-president-elect, was automatically raised to the presidency. Dr. Bortz, in both his presentation in the House of Delegates and in his presidential address, made definite and interesting suggestions. His first one was that the mid-winter meeting of the House of Delegates should be held in various sections of the country, perhaps dividing the country into eight or twelve geographic districts, and that this December meeting should be of two days' duration, followed by a scientific meeting lasting two days, with the papers directed particularly towards the interest of the general practitioner. This suggestion was passed by the House of Delegates, and, no doubt, such a session will be instituted next December in a place to be designated. Dr. Bortz also suggested that medical students be taken into the Councils of the American Medical Association and that they be given a definite part in its affairs, perhaps reviving a student section in the *Journal,* and that they be given the privileges of presenting papers in programs of the various sections. He also suggested that one of the bureaus prepare a booklet for them which would indicate the activities and interest of the Association. Ending his address, he called attention to the fact that the present headquarters of the American Medical Association is physically inadequate to take care of the many phases of its activity, and he suggested that the question of enlarging the present building, or even building a new structure on a different site, be definitely looked into. This was given quite serious consideration.

Early in the proceedings of the House of Delegates, the Board of Trustees announced that the Raymond Rich Associates, who had been public relations counsel, and Mr. Swarts had resigned, and that their resignations had been accepted immediately. It was very obvious from the report of the Board of Trustees that the service of these individuals was no longer desirable nor advantageous to the development of a real public relations program. The Secretary of the Board of Trustees announced that there would be a rearrangement of personnel in the American Medical Association in order that a real public relations program might be developed. The reason for the delay in the organizing of this program was quite evident in that all of the efforts of the Association, or most of them, had been directed towards the centennial meeting. The committee report with reference to national defense in the event of another war received thoughtful consideration. It was brought to the attention of the delegates that such an eventuality would call for the immediate coordination of the military, civilian and medical forces and that this coordination must be immediate. Because of the evident seriousness of this possibility, it was recommended that a Council on National Emergency Medical Service be set up to arrange and plan all the aspects necessary for meeting such an emergency.

The question of general practice or the general physician probably received more consideration than any other subject. Numerous resolutions were presented to the House of Delegates with reference to the situation of the general practitioner and his future. It was defi-

nitely recommended that general practice sections be set up in all large hospitals and that appointments to hospitals include general practitioners, and not be limited to individuals certified by various specialty boards. In this connection it was felt that medical students should receive some instruction from qualified general practitioners and that some part of their medical career should be spent in association with these individuals. It was thought that internships particularly directed toward the training of those who would go into general practice be set up in qualified hospitals and that these be of at least two years' duration. The House of Delegates did not feel that the establishment of a Board of General Practice would settle the problems, but rather it was thought that a plan of continuing education would elevate the standard of general practice throughout the country.

Admiral Joel Boone made a very excellent report, reviewing in abstract the findings of his committee who looked into the health conditions amongst the miners. An abstract of this report will be found in the *Journal of the American Medical Association,* June 9, 1947. Admiral Boone called attention to the fact that here was presented an excellent opportunity for labor, management and medicine to work in harmony towards the betterment of health, medical care and sanitary conditions in mining districts, which were obviously deplorable, but not the fault of any one of these organizations.

The Constitution and By-Laws were completely revised but, after considerable debate, it was thought necessary that these lie over until next year before adoption. A resolution was presented regarding the financing of medical education and medical schools, realizing that this question was of great importance because of increasing costs of this education and the lack of funds. This resolution was referred to the Council on Medical Education and Hospitals, who are now about to launch an investigation into all of the medical schools of the country, and no doubt this question will receive adequate consideration. The Board of Trustees was directed if necessary to increase the dues of the American Medical Association to ten dollars per year to take care of the increased costs of all the phases of its activities, the need of which was definitely shown by the financial report, and also to support adequately a real public relations program.

The Committee on Rural Medical Service recommended that local rural councils be established in the various counties throughout the country and this was also supported by the House of Delegates. The appointment of a committee to investigate the present nursing shortage was recommended and such a committee would go into the present objectives of the nursing profession, the standards of education, the time consumed for training, the curriculum, the supply of nurses, the quality of service rendered, the remuneration therefor, etc. This committee also should go into the training of practical nurses.

The House of Delegates definitely resolved that the American Medical Association was against tying education, security and health together under one head, as provided in the Taft Bill.

Because of the fact that so few cities have sufficient facilities to take care of the scientific exhibits and commercial exhibits, the place of meeting in 1948 was changed from St. Louis to Chicago, in 1949 from New York to Atlantic City and in 1950 to San Francisco.

In conclusion, it might be stated that the extension of prepayment insurance, the cost of medical care, the redistribution of doctors, definition of health centers and preservation of the rights of doctors to practice a high type of medicine received serious consideration. There can be no doubt about the centennial session's going down in medical history as an epoch making event.

H. B. MULHOLLAND
J. MORRISON HUTCHESON

Publication and Program

Your committee has two functions: the preparation of a program for the annual meeting, and the publication of the MONTHLY. This year it was possible to accept almost all the papers that were submitted, because there was enough available space in the Hotel Roanoke to permit of two sections.

Paper shortage still limits the size of the journal. Nevertheless we have been able to get out a journal that, in quality and appearance, is a credit to the Society. Your committee wishes publicly to acknowledge its indebtedness to the invaluable assistance of the Executive Secretary, Miss Agnes Edwards.

WYNDHAM B. BLANTON
A. P. JONES
M. P. RUCKER
Chairman

Clinical and Medical Education

A meeting of the Committee was held in the early part of the year and it was decided to hold all day clinics throughout the State, devoted to the early diagnosis and the treatment of cancer. Two such clinics were held; one in Suffolk on March 28, 1947. There was a total attendance at this Clinic of about 30 people. About 20 doctors, both white and colored, and about 10 members of the welfare departments of Suffolk, Nansemond and Southampton Counties.

The second all day clinic was held at Urbanna on July 22, 1947, with the Mid-Tidewater Medical Society. About 20 white physicians attended that session.

In addition to these two all day clinics the University of Virginia Medical School put on a two weeks refresher course in the latter part of May. There were 93 doctors from Virginia and neighboring states in attendance. No registration fees were charged for any of these courses. The entire expense was met out of the appropriation allocated to this Committee. This is the first attempt at any post-graduate work for the last five years owing to war conditions and shortage of doctors.

As usual, record cards for Pre-Natal and Post-Natal Maternal Examinations have been distributed to doctors requesting them. About 1,000 such cards have been furnished doctors during the year.

FINANCIAL STATEMENT

August 24, 1946—Balance on hand (Special Fund)	$ 86.55
April 2, 1947—Received of Medical Society of Virginia	600.00
July 12, 1947—Refunded by Dr. Staige Blackford	76.66
	$763.21

DISBURSEMENTS

April 2, 1947—Advance to Dr. Staige Blackford for Post-Graduate Course at University of Virginia	$200.00
Disbursements for other Clinics	192.90
	$392.90
August 19, 1947—Balance on hand	370.31
Less $86.55 Special Fund	86.55
To be returned to Medical Society of Virginia	$283.76

PLANS FOR THE FUTURE

At present, plans are being made for a post-graduate cancer clinic to be held in Roanoke in September in cooperation with the Roanoke Academy of Medicine. Members of the faculties of the University of Virginia and the Medical College of Virginia medical schools will be on the program. Other courses on cancer will be held in the southwestern part of the state if tentative plans materialize.

For some time consideration has been given to a plan of employing a full-time clinician in cancer and another in psychosomatic medicine to spend their entire time holding post-graduate courses for doctors in all parts of the state. During the coming year it is hoped that means will be found to bring these plans to fruition.

In order that local clinics may be held whenever component societies request them and in order that other activities may be carried on, it is recommended that the Medical Society of Virginia again appropriate $1,200 to be used for the work of this committee.

JULIAN L. RAWLS, *Chairman*
L. J. ROPER
JAMES P. BAKER
S. D. BLACKFORD
H. S. DANIEL
R. BRYAN GRINNAN
GEORGE B. ZEHMER, *Executive Secretary*
JOHN ALEX. RORER, *Asst. Ex. Secretary*

Scientific Exhibits and Clinics

As usual, because of lack of sufficient space, our Scientific Exhibits are handicapped. We could have more Scientific Exhibits if the majority of the space was not allotted to Commercial Exhibits.

We realize the Society must have funds to carry on its good work, but if more enthusiastic interests in the meetings are desired, I believe the Scientific Exhibits are our best drawing card.

This year there are twelve Scientific Exhibits, many of which are gotten up by more than one individual.

The titles of the exhibits and the exhibitors are as follows:

CHEMOTHERAPY MASKING SYMPTOMATOLOGY—Vincent W. Archer, M.D.; George Cooper, M.D.; and Norman Adair, M.D., Department of Roentgenology, University, Virginia.

VAGINAL SMEAR IN THE DIAGNOSIS OF UTERINE CANCER—William Bickers, M.D., Richmond, Virginia.

SCIENTIFIC EXHIBIT ST. ELIZABETH'S HOSPITAL—Austin I. Dodson, M.D., and Leroy Smith, M.D., Richmond, Virginia.

U.S.P. XIII EXHIBIT—J. K. Finnegan, Ph.D., and Harvey B. Haag, M.D., Medical College of Virginia, Richmond, Virginia.

CONTACT DERMATITIS AS SEEN IN PRIVATE PRACTICE—Richard W. Fowlkes, M.D., and Allen Pepple, M.D., Richmond, Virginia.

A KODACHROME DEMONSTRATION OF THE EXTERNAL DISEASES OF THE EYE—Department of Ophthalmology, Gill Memorial Eye, Ear and Throat Hospital, Roanoke, Virginia.

DISABILITY EVALUATION—F. A. Hellebrandt, M.D., Baruch Center of Physical Medicine, Medical College of Virginia, Richmond, Virginia.

EXPERIMENTAL INVESTIGATION IN MALARIA—Robert W. Ramsey, Ph.D.; Sarah Bradford, M.S.; and John Moose, B.S., Department of Physiology, Medical College of Virginia, Richmond, Virginia.

RHEUMATIC FEVER—Carolyn McCue, M.D., and

HEMATOLOGY IN CHILDREN—J. H. Scherer, M.D., Department of Pediatrics, Medical College of Virginia, Richmond, Virginia.

EARLY AMBULATION—Ernest T. Trice, M.D., Richmond, Virginia.

MEDICAL ILLUSTRATIONS—Helen Lorraine, Richmond, Virginia.

We sincerely hope you will enjoy the exhibits and please lend your support by visiting the scientific exhibits and talking to those at the booth.

H. F. DORMIRE
VINCENT W. ARCHER
W. AMBROSE MCGEE, *Chairman*

Legislation

The work of the Committee on Legislation is largely done during the years in which the General Assembly meets. and for this reason we have not been very active in 1947. However, the Committee had a joint meeting with the Council in May, and is now ready to carry out the instructions of the Society as to any legislative matters affecting the medical profession. The growing interest of the public and the State in health and welfare movements, and the availability of Federal and State funds for use in this field, indicate that we shall have a busy time at the session which convenes next January.

The provisional five year licenses given chiropractors and naturopaths will expire in December, 1949, and as the members of these cults still stubbornly refuse to take the examination required for full admission to

practice, there is every reason to believe that in 1948 they will renew their drive for permanent licenses without any show of competency. If that occurs, this Committee will desire to unite the full strength of the Medical Society of Virginia and its component groups in opposing any relaxation of the medical practice statutes. To do this successfully we shall need the co-operation and assistance of the individual members of our profession throughout the State. We shall count on you for that help.

W. C. CAUDILL, *Chairman.*
DEAN B. COLE
FRANK A. FARMER
JAMES R. GORMAN
FRANK S. JOHNS
W. A. PORTER
G. C. TYLER
C. C. SMITH
ALEX. F. ROBERTSON, JR.

Medical Economics

The Medical Economics Committee has had no matters referred to it for action, no meetings have been held, and has no report to present.

JOHN T. T. HUNDLEY, *Chairman.*

Ethics

The only matter to come before the Ethics Committee during the past year was the complaint of the Virginia Society for Pathology and Laboratory Medicine against the Medical College of Virginia Hospital, because of a letter sent to all doctors practicing in the hospital offering them laboratory work at special consideration in the way of concessions or rebates. The Medical Society of Virginia Council passed a resolution asking the Ethics Committee to act on the complaints after proper investigation. When this was published in the MONTHLY, we had a letter from Mr. Robert Hudgens, director of the hospital, inviting us to visit the hospital and make any investigation we wished. This was done by one (J.L.H.) of us and a most satisfactory conference was had with Mr. Hudgens and Dr. Williams, head of the laboratory department. A complete report was studied by all members of the committee who were unanimous in the opinion that no principles of ethics had been violated by the hospital. There were. however, some minor differences which warranted consideration and adjustment. We felt that these should and would be satisfactorily adjusted between the College Hospital and the Virginia Society of Pathology without further action by the committee.

R. L. RAIFORD
K. D. GRAVES
JAMES L. HAMNER, *Chairman*

Membership

TO THE HOUSE OF DELEGATES:

Your Membership Committee reports that all new members admitted this year have come in through membership in component societies and have required no action by this committee.

The following is a list of those admitted to membership since the last meeting:

Dr. Norman Adair, Charlottesville
Dr. Charles Palmer Alexander, Amonate
Dr. Eugene Willard Arnett, Jr., Danville.
Dr. Sidney Raymond Arnold, Amherst.
Dr. James Paul Bailey, Kecoughtan
Dr. Edgar Baron, Hampton
Dr. Jerome Nathaniel Baum, Alexandria
Dr. Charles William Beaven, Newport News
Dr. Richard Phillips Bell, Jr., Staunton
Dr. Clift Palsgrove Berger, Arlington
Dr. Henry Bernstein, Arlington
Dr. Monte Leroy Binder, Richmond
Dr. Richard E. Bower, Richlands
Dr. John Otto Boyd, Jr., Roanoke
Dr. Edgar Clayton Brantly, Jr., Danville
Dr. Allen Leet Byrd, Danville
Dr. George Bentley Byrd, Norfolk
Dr. Paul Kiser Candler, Warrenton
Dr. Pauline Nichols Davis-Carmichael, Covington
Dr. Joseph Willis Carney, Newport News
Dr. Charles Clay Carr, Pennington Gap
Dr. Kenneth Jerome Cherry, Richmond
Dr. Walter Scott Clark, Jr., Arlington
Dr. James Thomas Colley, Rocky Mount
Dr. Robert Lawrence Corbell, Jr., Portsmouth
Dr. Harold Fee Corson, Richmond
Dr. John Granville Crawford, Charlottesville
Dr. Robert Clifford Crawford, Roanoke
Dr. Andrew Jackson Crutchfield, Charlottesville
Dr. DeWitt Cornell Daughtry, Richmond
Dr. James Lucius Davis, Waynesboro
Dr. Alonzo Ray Dawson, Richmond
Dr. Anthony Rynham DiSario, Arlington
Dr. Julian Quayle Early, Charlottesville
Dr. Alton Coles Echols, Purcellville
Dr. Thomas Stilwell Edwards, Charlottesville
Dr. John Randolph Eggleston, Danville
Dr. Stuart J. Eisenberg, Richmond
Dr. Joseph Johnson Eller, Marion
Dr. Graydon Rader Evans, Clinchco
Dr. Allen Montague Ferry, Arlington
Dr. Herbert William Fink, Norfolk
Dr. Clara C. Joel Fleischer, Richmond
Dr. Charles Gabriel Fox, Jr., Pulaski
Dr. Fleming Wood Gill, Richmond
Dr. Albert Ritchie Gillespie, Staunton
Dr. Irving Bachrach Gold, Richmond
Dr. Milton Sidney Goldman, Norfolk
Dr. Arthur Broaddus Gravatt, Jr., Kilmarnock
Dr. William Nelson Greever, Chilhowie
Dr. Michael Ignatius Hanna, Covington
Dr. Forest Gilkeson Harper, Staunton
Dr. William Henry Harris, Jr., Richmond
Dr. Tom Wiley Hodges, Richmond (Now Washington, D. C.)
Dr. Beverly Long Holladay, Suffolk
Dr. George Grundy Hollins, Jr., Norfolk
Dr. William Benjamin Hoover, Norfolk
Dr. Ira Thomas Hornbarger, Hot Springs
Dr. John Campbell Hortenstine, Winchester
Dr. William Howard Hosfield, West Point
Dr. Jacob Samuel Huffman, Davton
Dr. Jethro Hurt Irby, Martinsville
Dr. Roger Alfred Jackson, Richmond
Dr. John Leonard Jennings, Danville
Dr. Walter Henry Johnson, Ceres
Dr. Clarence Frederick Johnson, Jr., Grundy
Dr. Benjamin Calloway Jones, Jr., Alexandria
Dr. Gordon Willis Jones, Fredericksburg
Dr. Granville Lillard Jones, Williamsburg
Dr. Sarah Hoover Jones, Richmond
Dr. George Barnard Kegley, Bland

Dr. Douglas Oliver Kern, Charlottesville
Dr. Edward Joseph Kiember, Richmond
Dr. Marion Kirwan King, Norfolk
Dr. Gardner Hayden Landers, Roanoke
Dr. John Berchmans Leary, Arlington
Dr. Robert Winding Lee, Arlington
Dr. George Paul Lemeshewsky, Alexandria
Dr. Donald Wayne Linck, Charlottesville (Now Walla Walla, Washington)
Dr. Garnett William Link, Danville
Dr. Robert Coleman Longan, Jr., Richmond
Dr. Thomas Lawman Lucas, Alexandria
Dr. Theodore R. Mack, Richmond
Dr. James Murdock MacMillan, Richmond
Dr. Frederick Byrne Mandeville, Richmond
Dr. Frederick DeWitt Maphis, Jr., Strasburg
Dr. John Rogers Mapp, Charlottesville
Dr. Jerome David Markham, Richmond
Dr. James Calvin Martin, Pulaski
Dr. Moses Hamilton McClintic, Danville
Dr. Anabel Shawkey McConnell, Gate City
Dr. Frederick Gray McConnell, Gate City
Dr. Blake Walden Meador, Richmond
Dr. Karl Frederick Menk, Charlottesville
Dr. Herman Arnold Meyersburg, Norfolk
Dr. Benjamin Miller, Kecoughtan
Dr. Frank John Miller, McGaheysville
Dr. Solomon Bear Mizroch, Norfolk
Dr. William Thomas Moore, Richmond
Dr. Rafael A. Mora, Williamsburg
Dr. John William Henry Morgan, Ewing
Dr. Philip Joseph Morrison, Richmond
Dr. John Langdon Moss, Louisa
Dr. Bernard Kyle Mundy, Lynchburg
Dr. Isaac Floyd Nesbitt, Newport News
Dr. Harry Nushan, Sussex-at-Hampton
Dr. Bernard Donald Packer, Richmond
Dr. Albert Elwood Pagan, Arlington
Dr. Edwin James Palmer, Roanoke
Dr. Joseph Corbin Parker, Richmond
Dr. Robert Lee Payne, Jr., Norfolk
Dr. Leroy Sannoner Pearce, Lynchburg
Dr. James McGuire Peery, Richlands
Dr. Robert Tunstall Peirce, Jr., Newport News
Dr. Leonard David Policoff, Richmond
Dr. Thomas Bryant Pope, Petersburg
Dr. Alfred Eldridge Powell, Madison
Dr. Oscar Lee Ramsey, Jr., Gretna
Dr. Samuel Richman, Richmond
Dr. Elmer Shackleford Robertson, Richmond
Dr. Charles Nichols Romaine, IV, Richmond
Dr. William Anderson Sadler, Mathews
Dr. Philip F. Sahyoun, Richmond
Dr. Roy Burton Sampson, Jr., Roanoke
Dr. Eric Carl Schelin, Richmond
Dr. David William Scott, Jr., Fredericksburg
Dr. Eugene William Senter, Salem
Dr. Herbert Linville Shinn, Hallieford
Dr. Alfred Littlefield Smith, Richmond
Dr. Mason Smith, Richmond
Dr. John Lewis Smoot, Fredericksburg
Dr. Lewis Frank Somers, Lynchburg
Dr. George Speck, Arlington
Dr. John Hammitt Sproles, Pocahontas
Dr. Vernon Andrew Stehman, Arlington
Dr. Hugh Gregorie Stokes, Williamsburg
Dr. William Joshua Sturgis, Jr., Nassawadox
Dr. William Norman Thornton, Jr., Charlottesville
Dr. Andrew Martin Tiernan, Jewell Ridge
Dr. Robert Frederick Tilley, Charlottesville
Dr. James Wallace Todd, Norfolk
Dr. Lee Barnhardt Todd, Newport News
Dr. James Baker Twyman, Charlottesville
Dr. Robert Lee Waddell, Galax
Dr. Harold Edmond Wager, Charlottesville
Dr. Oscar Wilde Ward, Jr., Phoebus
Dr. Joseph Edwin Warren, Lynchburg
Dr. Harold Brown Webb, Waynesboro
Dr. David Calloway Whitehead, Danville
Dr. William Byrd Wiley, Norfolk
Dr. William Hays Windley, Newport News
Dr. Nathaniel Henry Wooding, Halifax
Dr. Paul Andrew Woods, Waynesboro

We take pleasure in recommending for Honorary Membership in the Society the retiring president, Dr. William L. Powell.

Obituary notices, when available, have been published in the MONTHLY. The names of deceased members will be presented to the Society at the general meeting on the first evening.

J. BOLLING JONES
J. F. THAXTON
B. E. HARRELL, *Chairman*

Judicial

Your Judicial Committee begs to submit the following suggestions for change in the By-Laws:

Article I, Section 3, the word "standing" should be inserted as the third word in line 2.

Article V, Section 2, add the following sentence:

"Delegates and alternates shall be members of the Medical Society of Virginia."

Article VI, Section 6, to read as follows:

"Councilors shall be elected at the annual meeting for a term of two (2) years, those from odd numbered Councilor Districts on odd years, and those from the even numbered Councilor Districts on even years. At the first meeting of the House of Delegates the President shall appoint a chairman from the delegates of each district, whose duty it shall be (1) to secure a list of qualified delegates from his district, (2) to designate a time and place for their meeting, and (3) to report their nomination for Councilor to the succeeding meeting of the House of Delegates. No Councilor who is eligible for re-election shall attend the meeting of his district. Should there be a vacancy in the membership of the Council and the district not represented in the meeting, the House of Delegates, on nomination by the President, shall elect a Councilor for that district."

Respectfully submitted,
J. MORRISON HUTHESON
P. ST. L. MONCURE

Public Relations

A. SELECTION OF PERSONNEL AND ESTABLISHMENT OF OFFICE

The setting up of a Public Relations Committee by the Medical Society of Virginia in 1943 imposed certain responsibilities on the Committee. Their job was to select the personnel, establish an office, and set in motion the whole program of Medical Public Relations for the State of Virginia.

The Committee after considerable deliberation selected a Director of Public Relations to begin his duties March 15, 1946, and instructed him to make a study of the whole picture of Medical Public Relations in this country

and to bring back to the Committee recommendations for their consideration. The matter of securing an office was indeed a problem, but the Richmond Academy of Medicine came to our rescue and permitted the use of their board room at a very reasonable rental.

Although the Committee has encouraged recommendations of the Director on the necessary personnel, equipment, etc., for the office, their advice has been sought and followed on the minutest details conceivable.

B. DETERMINING THE POLICIES AND OBJECTIVES

Naturally the policies and objectives of Medical Public Relations gave the Committee a great deal of concern. These were drafted, studied, and passed on to the Council for approval. Copies of them were published in the VIRGINIA MEDICAL MONTHLY, July, 1946. Particular reference was made there to the Five Point Program.

C. SETTING UP A PROGRAM TO ACCOMPLISH OUR PURPOSE

To carry out the policies and objectives a program was conceived which in the most democratic manner was presented to the House of Delegates October, 1946, and later taken to the vast majority of the local medical societies for discussion.

D. DEVELOPING AN ORGANIZATION TO CARRY OUT THIS PROGRAM

Even in the early stages of the Committee's progress toward a Public Relations Program, it became very evident that an organization was essential to carry out the program envisioned. Some medical societies already had a Public Relations Committee, but these were for the most part in the larger cities, and very few, if any, members of the District Council were believed to be particularly active in Public Relations activities for their societies.

Each Councilor was requested to have designated a member of the District Council for each medical society and one for each county in which there were doctors but no medical societies to work with the Councilor in the Congressional Districts. This has been done in practically every instance and already some of these members of the District Council have been holding conferences on the matter of their assistance in launching the program. Definite activities have been suggested for members of the District Council and some of these appear to be getting underway nicely. We believe that a number of Public Relations Committees in local medical societies are lending a hand to the State-wide program in addition to localized activities.

E. CONSIDERATION OF ACTIVITIES AND MATERIALS

Although Public Relations policies and objectives have been referred to, the Committee has devoted a lot of time to consideration of appropriate activities and materials in implementing the projected program. It has gone into an evaluation of various types of radio programs, press releases, health columns, "Medical Facts and Folklore", various items of literature, most of which may be seen in our exhibit. The Committee has also devoted a lot of study to radio scripts and transcriptions prepared outside of our State for the selection of materials considered appropriate in Virginia.

In determining the policies and objectives, setting up a program to accomplish our purpose, developing the necessary organization, and in consideration of activities and materials, it has been necessary for the Public Relations Committee to devote a great deal of time to detailed study. Your Committee has met approximately once a month, devoting generally a full evening to these meetings. It has also met with the Council and representatives invited from each medical society and other guests, including representatives from the State of Michigan, the Virginia Medical Service Association, and consultants in radio, the press, and in education, for an all-day Public Relations Conference in Richmond, December 19, 1946.

F. SOLICITING ACTIVE SUPPORT OF MEMBERS OF THE MEDICAL SOCIETIES

As your Committee foresaw the necessity of an organization to carry out our program, it has also felt very keenly the need of active support of members of the medical societies. In order to meet with success, it directed the Director to contact every local medical society indicating his desire to accept any invitation to meet with the medical society and to carry out any engagement that they might make for him with any civic organization or other group to discuss matters pertinent to our undertaking. The Committee has studied very carefully and advised from time to time the Director on the nature of these engagements and feels that this is one important means of acquainting the doctors of our State with those things that have been adopted and to solicit suggestions for further improvement of any anticipated activities. The response by members of the medical societies in support of our program has been very gratifying to the Committee and those closest to our Public Relations activities.

G. STUDY OF BUDGET MATTERS

Perhaps one of the most important considerations in our Public Relations organization falls under the category of the budget. After careful study, it was originally estimated that this department would probably need approximately $30,000 a year to carry out a creditable program. This budget, of course, was passed on by the Budget Committee of the Society and taken before the House of Delegates at the meeting in October, 1946. It was anticipated that increased dues from seven to twenty-five dollars a year would provide the necessary amount.

Although this report is being made approximately sixty days before the end of this fiscal year, the Committee is happy to state that it appears that approximately $11,000 of this year's budget will be unused.

In making this statement several observations may be in order. In connection with our radio program which was put on in twelve stations covering the State from April 28 to July 25, approximately five minutes a day for five days a week, it might be pointed out that considerable saving was effected by the arrangement that

was carefully worked out with another State whereby a saving in the production of the materials was brought about. This item alone could easily have saved us $10,000.

The Committee feels that another fact should be reported to you—that the radio programs we have put on have been of such an acceptable nature that our Department of Public Relations was fortunate in getting them accepted as a public service which means that the radio time we have been fortunate in getting for two radio programs, twelve stations for one and eleven for the second, has not cost the Medical Society of Virginia one penny. As pointed out, we are proud of these facts because they indicate first of all that our programs, as seen by the radio people, appear to be acceptable and may, therefore, be regarded as a credit to the medical profession, and the second item being the fortunate position we enjoy in effecting a saving of the amount that some states are paying for radio time.

The above mentioned two items in a measure represent the position taken by your Committee to the effect that at least a good portion of our money should be spent in selecting the personnel to develop the type of program that sells itself instead of spending the same money in purchasing time and space with the radio and press for programs that may be less desirable.

H. APPRAISAL OF OUR PROGRAM (LOCAL AND OTHERWISE)

Although our Public Relations Program is young and it may be better in this instance not to go as fast as we should like in the interest of perfection, through the safeguard of a cautious approach the Committee with your assistance and with the advice of others has endeavored to appraise every aspect of our program. We have had considerable encouragement from those in the State who have had the time to give some study to it and feel pleased with some of our accomplishments and are hopeful of still greater things. There have been a few people who have raised the question of why we increased the dues, but we know of no instance in which any doctor raising this question has not appeared to be satisfied on the point when he found out what the budget was for the year and how it was to be spent.

Even your embryonic program in Virginia has been complimented by a number of other states and some of those in the American Medical Association headquarters. As evidence of this, your Director has been invited to a southern city to help organize a Public Relations conference for six states and to serve as chairman of that program. We hear by the grapevine that he is scheduled to be invited to assist in another similar conference of equal importance this fall.

Your Committee is deeply conscious of the fact that our program has not reached perfection, but it is striving for one that is second to none in any state of our comparable size, ability to pay, and number of doctors.

I. FUTURE PLANNING

In the matter of future planning there seem to be at least three points to be considered: first, the type of program that we should select, second the means of implementation, and third the estimated cost.

Although at the time of the preparation of this report we still have much to do in planning for the future, the Committee believes that our program will be of a conservative type, perhaps enlarging on some of those things the public construed most beneficial during the fiscal year and the possible revision of some of our activities. Our means of implementation may very well follow the general pattern affecting our work in the past. The Committee still believes that the radio, the press, the forum, literature, our educational institutions, civic groups, etc., provide a coveted avenue of reaching the public and that those items which the doctors of medicine may wish to devote some discussion to and possible improvement of are matters that may very well be approached first through the medical societies.

Budgeting for a program of Public Relations, this far in advance, is indeed difficult, and we do not have the absolute in the materials and services we shall need or the cost of them, but it is certainly the recommendation of your Committee and their earnest desire that our Department run within its budget and we believe that there is not immediate need of considering any increased budget over that of last year.

Your Committee is loath to feel particularly complimented by anything that has been accomplished but instead is grateful for the support, the cooperation, and circumstances, all of which lend encouragement to our efforts in the future.

The success of Medical Public Relations favors our present system of medicine and weakens the status of socialized or government controlled medicine.

J. M. EMMETT, *Chairman*
H. B. MULHOLLAND
L. J. ROPER

Rural Medical Service

The Committee on Rural Medical Service had a meeting in May of this year, and the chairman reported the results of the National Conference on Rural Health held in Chicago in February, and also a more recent conference with some members of various farm groups. At this meeting, the Committee felt that the members of the Medical Society of Virginia through their component societies should initiate and take the lead in the formation of local health councils; to discuss and study the needs for local areas with emphasis on the rural side.

The Committee also met in Blacksburg on July 30th and held a round-table discussion with members of farm organizations. At this meeting, the question of establishment of facilities which would attract doctors to rural districts, the maintenance of such centers and the financing of building these, was brought up. The consensus of opinion was that facilities must be provided and in some areas the local communities will have to maintain these or at least aid in their maintenance. The matter of health education too amongst rural people was discussed. It was felt that this is an important part of

the program, because even though facilities were set up, without health education, they would not be properly used. From the conference with the farm groups, it was again emphasized that discussions must be held between doctors and farmers right down in the grass roots. The Committee on Rural Medical Service plans to have more of these meetings with the state farm groups in the future.

H. B. MULHOLLAND, *Chairman*
L. R. ROPER
W. R. PRETLOW
E. S. JAMISON

Child Welfare

The Child Welfare Committee has not held a meeting as such this year. The chairman wishes to report further progress on the Study of Child Health Services which was reported upon last year at the annual meeting.

The Virginia survey was completed last September and the material sent to the Washington office for statistical compilation. A preliminary draft of tables has been returned to the State Chairman of the American Academy of Pediatrics and his committee. It is planned that when the material has been finally drafted a comprehensive written report including statistical tables can be given to the Medical Society of Virginia and the material broken down for smaller areas can be made available to local medical societies. It is hoped that it will be of use in planning for improvement of Health Service for the Child in local areas as well as the State as a whole.

EMILY GARDNER, *Chairman*
J. M. BISHOP
W. T. GRAHAM
R. B. HIGHTOWER
MARY ELIZABETH JOHNSTON
F. N. MULLEN, JR.
W. W. WADDELL, JR.

Maternal Health

The Maternal Health Committee met at the Academy of Medicine, Richmond, December 12, 1946. It is noted that a large number of the members were present, showing the interest in this work. Those present were: Drs. Carson, Carter, Groseclose, Nunnally, Payne, Plunkett, Rucker, Shamburger, and Andrews, Chairman.

A report on the Maternal and Child Health Program of the State Department was made as follows:

Cases hospitalized	808		
Obstetric	506	Pediatric	302
White	236	White	183
Colored	270	Colored	119

Of the total number of cases hospitalized there were:

Clinic cases	
White	105
Colored	181
Sterilization	93
Premature infants	45

Hospital days	10,872
Average obstetric days	13.3
Average pediatric days	14.06
Cost of obstetric patients	$41,305.78
Average cost per case	81.10
Cost of pediatric patients	$24,275.00
Average cost per case	81.46
Total Cost	$66,580.78

Total cases hospitalized from October 15, 1942 to July 1, 1946.

Obstetric	1,818
Pediatric	1,044
Total	2,862

Total number cases to December 10, 1946	27,854
Total Cost	$1,627,230.41
Average cost per patient	$58.64

Summary of Maternal and Child Health Clinic Services
July 1, 1946-June 30, 1947

	No. in Operation
Prenatal Clinics	99
Well-Baby Clinics	41
Total	140

	No. in Operation
ADMISSIONS TO CLINICS:	
Prenatal patients	7,291
Postnatal patients	4,075
Well-Baby patients	9,722
Preschool patients	18,307
Total	39,395
CLINIC VISITS:	
Prenatal cases	31,618
Postnatal cases	4,075
Well-Baby cases	29,167
Preschool cases	36,615
Total	101,475
Local physicians serving as clinicians	256
PERCENTAGE CLINIC ATTENDANCE BY RACE:	
White	36.7
Colored	63.3
PERCENTAGE OF CLINIC ATTENDANCE BY SERVICE:	
Prenatal cases	31.2
Postnatal cases	4.0
Well-Baby cases	28.7
Preschool cases	36.1
PATIENTS HOSPITALIZED UNDER MCH PLAN:	
Obstetric	920
Pediatric	446
Total	1,366

It is obvious that this plan is furnishing considerable amount of relief urgently needed and undoubtedly is reflected in our reduced maternal mortality rate which is now 2.2, the lowest Virginia has ever had and compared only slightly unfavorably with that of the U. S. which is 2.1. The Committee feels that this plan should be enlarged upon. We have approximately 100 prenatal clinics and this hospitalization plan is the only way possible for most of them to hospitalize the indigent patients who require hospitalization. It is gratifying to know that it is being used successfully and that the cost of it is reasonable and practical. We feel that more doctors should be informed of this plan. The VIRGINIA MEDICAL MONTHLY has been most cooperative in publishing articles on this subject at different times.

It is the unanimous feeling of this Committee that the survey of maternal deaths in the State be resumed as

soon as possible and that sufficient salary be paid to obtain personnel for the work. We feel that this is highly important. Two of the members of the Committee, Dr. Rucker and Dr. Andrews, were appointed to confer with the State Health Commissioner regarding this problem. It was found that it was apparently impossible to do it this year, but we feel that this should be carried through as soon as possible.

It was resolved that a further effort be made to have a uniform definition of stillbirths in all states. At present, there is a wide variation in what individual states consider to be stillbirths and consequently the statistics on this subject are of little value, certainly for comparative purposes.

The Committee recommended that as soon as possible, the State Laboratory do Rh testing at the same time the Wassermann is done.

Dr. Shamburger was appointed a committee of one to report on this problem. He reports that "it is possible that the laboratory here may finally be able to do Rh testing, but at this time the approximate 50 per cent reduction in personnel is a factor in making it impossible. The chance of having this testing done has been looked into by the Director of the Laboratory with the result that the likelihood is not so good just now of having anything done." It is obvious that the postwar condition and lack of personnel is still hampering the obstetric effort in Virginia.

J. M. NOKES
A. L. CARSON
G. N. CARTER
A. M. GROSECLOSE
C. A. NUNNALLY
W. R. PAYNE
F. O. PLUNKETT*
M. P. RUCKER
L. L. SHAMBURGER
C. J. ANDREWS, *Chairman*

Walter Reed

Belroi, the birthplace of Walter Reed, is now in good condition, having had one coat of paint during the past year. The grass has been kept cut. Doctors are invited to visit Belroi whenever in the locality.

It is requested that an appropriation of $75.00 be allowed in the budget for insurance and upkeep of this property.

J. D. CLEMENTS
JAMES W. SMITH
CLARENCE PORTER JONES
Chairman

To Confer with State Board of Nurse Examiners

The Committee has not been called upon during the year so has no report.

I. A. BIGGER, *Chairman*

*Deceased.

Venereal Disease Control

On March 6, 1947, Drs. Raymond Kimbrough, J. W. Love, David S. Garner, E. M. Holmes and W. W. S. Butler, of the Committee and by request Drs. Barksdale and Richard Fowlkes, met at the Commonwealth Club in Richmond. Dr. D. C. Smith was absent.

Reports follow on the subjects discussed which were:

1. Evaluation of Laboratories authorized under Virginia Premarital Examination Act.
2. Approval of a plan for the ambulant treatment of syphilis by the "rapid" method.
3. The administration of Rapid Treatment Centers.
4. A more effective method to obtain the cooperation of practicing physicians in reporting venereal contacts and getting this information promptly.

Part I

The Committee discussed the recent laboratory evaluation study conducted by the State Health Department under the terms of the Virginia Premarital Examination Act. As sixteen laboratories had failed, the Committee recommended that these laboratories be given temporary approval under the following terms:

1. That chief of the serologic section of the State Health Department Laboratory visit the laboratories that failed, to check their equipment and test procedures.
2. That technicians from the failing laboratories come to the State Health Department for one week's observation and inspection in serodiagnostic methods.
3. That these laboratories be sent 25 specimens, 10 non-syphilitics and 15 syphilitics, for evaluation.

Part II

The committee discussed the advisability of recommending ambulant treatment with penicillin, oil and beeswax, for syphilis and recommended for the present time and subject to change later, that early lesion syphilis (primary, secondary and mucocutaneous relapse) may be treated as follows: In public clinics located in large cities, 600,000 units a day for 5 to 10 days. In private practice, lesion syphilis will be treated with one of the two following schedules:

1. 600,000 units of penicillin, oil and beeswax, a day for 10 days or
   300,000 units of penicillin, oil and beeswax, 2 a day for 16 to 20 days.
2. That non-lesion syphilis (latent) be treated with 600,000 units of penicillin, oil and beeswax daily for 10 days.

The Committee did not recommend the concomitant use of arsenic and bismuth but stated that they felt that arsenicals and bismuth should be reserved for treatment failure and if administered should be given under the 26 weekly modified intensive arsenic-bismuth therapy schedule. The Committee further stated that with our present knowledge it is believed in the treatment of early lesion and non-lesion syphilis penicillin should be given a thorough trial first because it is safe and quick. The patient should be observed and followed up carefully for evidence of failure of cure. The physician after failures,

can, if necessary, resort to arsenic-bismuth and fever therapy. The exceptions to straight penicillin therapy without arsenic-bismuth and fever therapy are interstitial keratitis, optic atrophy and some of the other varieties of neuro-syphilis.

The Committee further recommended that all penicillin treated patients be followed up on the following schedule: monthly physical inspection examinations and quantitative serologic tests for the first year. Spinal fluid examination at six months, inspection and quantitative blood Wassermann tests on the 15th month, 18th month, 24th month and annually for the next three years.

Part III

The Committee recommended that the State Health Department survey the two rapid treatment centers, one located in Richmond and the other in Norfolk, for the purpose of deciding—first, whether both of these institutions should be kept open after July 1, 1947, and secondly, whether the State should take these institutions over from the Federal Government. It was the opinion of the Committee that rapid treatment under hospitalization is an essential in the State control program to care for patients from the rural areas, as it is believed that ambulant treatment would not be practical without prohibitive cost in patient follow-up in such areas. It was further recommended that the medical students from the Medical College of Virginia and the University of Virginia visit the center or centers if both are kept open, for observation in the clinical management of syphilis under hospitalization.

Part IV

To obtain a prompt report on the source of infection and later contacts of each contagious case. It is requested that some means be adoped at the State meeting to bring this to the attention of individual members.

Your Committee adjourned to meet on the Monday afternoon preceding the State meeting.

W. W. S. BUTLER, *Chairman*

Tuberculosis

For the past few years this committee has reported and emphasized only the things that the State was doing for tuberculosis, not mentioning its needs. Today we have reversed that policy and are calling your attention to a few things the State is not doing, but should do if it wishes to improve and further its tuberculosis program.

The diagnostic program has far out-stripped the treatment program, while the latter is just as important and should be linked with the first if we ever hope to succeed in conquering tuberculosis. What good will it do to find a case of tuberculosis if you are not going to attempt to treat that case? Our State Health Commissioner reported as of June 30, 1946, there were 10,522 known cases of tuberculosis in the State under supervision, 7,648 whites and 2,874 colored. Of this number there were only 845 cases in the State sanatoria, less than one in twelve. This report in all probability does not include the municipal sanatoria of approximately 475 cases.

There has not been any increase in the bed capacity for tuberculous patients for several years. Many of those we now have are not fit for use. We have approximately 1,500 beds, including State and municipal sanatoria. According to accepted standards we should have at least 4,000 beds.

As soon as possible we should get away from our present policy of accepting "only" those cases that are able to wait on themselves, dress and walk seventy-five to one hundred yards to their meals. This puts a premium on the sick individual. The ones that need treatment worse, the ones that are most responsible for spread of the infection are denied an opportunity of getting proper sanatorium treatment and care.

These cases, the ones that need treatment most, are forced to remain at home, shift for themselves and continue to spread infection, while the very early and moderately advanced cases, the ones that are able to help themselves, are taken in our State sanatoria. As a public health measure it is wrong in principle, it is not fair to the community nor to the patient. We hope that the State can prepare to accept all cases of tuberculosis that apply for treatment, early cases and advanced cases, complicated and uncomplicated.

The methods of treating tuberculosis have changed considerably in recent years—from simple rest in bed, fresh air and wholesome food, to collapse therapy including extensive major operations and chemical therapy. Consequently we need a much better type of building with well equipped laboratories and operating rooms manned by a trained personnel.

There are several old pavillions at each of our three State sanatoria that are antiquated, obsolete and not suitable for modern treatment of tuberculosis. These buildings should be torn down and replaced by modern infirmary or hospital type of buildings.

We admit that the cost of building at the present time is very high. Is it not possible that on a matching basis the State could obtain federal funds through the Hospital Survey and Construction Act, "Hill-Burton Bill"? This would help to offset the present high cost of construction.

We admit that by waiting a few years the State could save a few thousand dollars. By this delay many that are now sick will be dead and denied the chance of getting well, and many new cases will have developed. In the final analysis which is the cheaper?

STREPTOMYCIN:

As physicians we are supposed to use any and all available methods and drugs that in our judgment might help to cure our patients.

While Streptomycin is still considered to be in the experimental stage, there is sufficient evidence to prove that the drug apparently benefits certain types of tuberculosis and numerous complications. It should be made available to all that need it.

Unfortunately Streptomycin is very expensive at the present time, consequently a majority of the people who have tuberculosis are unable to purchase it and are denied its use. Therefore we recommend that the State Health

Commissioner include in his biennial budget sufficient funds with which to purchase Streptomycin. That the drug be made available to the staff of each of our three State sanatoria, to be used in such cases as they see fit.

Some one has said if Streptomycin was available to our State institutions every patient would want to take it. My reply to this statement: when Pneumothorax was started in 1914 we did not attempt to collapse every patient's lung. The same authority could be delegated in our sanatoria staff in the use of Streptomycin, as it was in collapse therapy. North Carolina, Alabama and other states have already taken this step. Virginia should not lag too far behind in improving her methods of treatment.

DIABETES:

A few years ago this society passed a motion requesting the Health Commissioner to admit to the State sanatoria tuberculous patients with diabetes, which had not been permitted up to that time. Thus far this policy has not been changed. We again strongly urge our Health Commissioner to make arrangements in the three State sanatoria to take care of tuberculous patients with diabetes. They should not produce an unnecessary burden on the sanatoria personnel. A report from the Health Commissioner is given herewith:

Tuberculosis cases under supervision in the State, including those in the sanatoria, for year ended June 30, 1946:

White, 7,648 Colored, 2,874 Total, 10,522

Patients treated in the State sanatoria:
White, 1,320 Colored, 537 Total, 1,857

Patients in the State sanatoria as of June 30, 1946:
White, 585 Colored, 260 Total, 845

Number of deaths for the year ended December 31, 1946: (all forms)
White 631 Colored, 628 Total, 1,259
Rate, 28.1 Rate, 88.3 Rate, 42.6

Number of cases reported for the year ended December 31, 1946: (all forms)
White, 2,392 Colored, 1,114 Unknown, 88 Total, 3,594

PHOTOFLUOROGRAPHY:

Photofluorography or Survey x-ray film is getting to be very popular. Though the film is quite small, 70mm, for ordinary purposes it is very satisfactory. When a suspicious lesion is found a regular size chest plate should be made.

Your committee recommends that every general hospital put in such a machine. That each hospital x-ray the chest of its personnel twice a year and every patient as he enters the hospital. The cost per person will be very small and many abnormal lesions of the chest will be recognized in the early stage that otherwise would be overlooked until the far advanced stage. The University Hospital at Charlottesville and Norfolk General Hospital each has a unit that is proving very useful and satisfactory.

FRANK B. STAFFORD
J. B. NICHOLLS
C. W. SCOTT
C. L. HARRELL, *Chairman*

Mental Hygiene

The Mental Hygiene Committee met on July 31, 1947, in Richmond, at the office of the Commissioner of Mental Hygiene and Hospitals.

Good progress has been made in mental hygiene in the State during the past year. A bill was passed by the special session of the Legislature in January making it compulsory for the licensing of all private mental hospitals and nursing homes. These institutions will be under the State Hospital Board and the Commissioner of Mental Hygiene and Hospitals has already drawn up standards which have been submitted to the various private hospitals. These rules have been approved by the State Hospital Board.

The law creating a Board of Examiners for clinical psychologists was passed last year. Seventeen have already been certified. This movement has created favorable nation-wide comment as it is the first of its kind in the United States.

No construction of the new State Hospital program has yet been done but the urgent need has been recognized by the governor and he has authorized a release of funds for this purpose. Some of the buildings will probably be begun before the year end.

The personnel deficit of the State Hospitals which has long been recognized has now been improved. The salary scale has been increased which should be the means of securing more competent doctors, nurses and attendants for the hospitals. The per capita cost is still far below that recommended by the American Psychiatric Association.

The alcoholic problem is still rather acute and the governor has appointed an Advisory Legislative Council which has collaborated with the special committee of the State Hospital Board. The State Hospital Board has recommended that an institution for chronic alcoholics not to exceed four hundred beds be established at a site to be selected. The Board recommends that the cases be thoroughly studied from the medical and psychiatric standpoint and industrial employment. This is a great need in the State. The Board feels that the development of outpatient clinics for the less chronic cases would be a forward step.

During the year part time Mental Hygiene Clinics have been established at Roanoke, Newport News, Danville and Fairfax. At Radford a clinic will be in operation by September 1947. At Norfolk a full time clinic began operation last year and has already proved its worth. This clinic should be an example to all of the larger cities of the State. Plans are under way to establish these clinics in thirteen different areas, contingent upon qualified personnel which is still quite scarce.

A new Child Guidance Clinic at the University of Virginia under the Department of Psychiatry will be in operation by September 1947. Funds for this clinic were created by the Community Chest at Charlottesville and Department of Mental Hygiene and Hospitals from a grant from the Federal Government which is being administered by the Public Health Service. A similar clinic is in the process of being developed at the Medical College of Virginia under the Department of Psychiatry.

A very active training program in psychiatry for those doctors who are interested has been started at both the University of Virginia Hospital and the Medical College of Virginia Hospital. Training programs for attendants are being carried on at the Eastern, Western and Central State Hospitals. This fall a psychiatric nursing affiliation with general hospitals will be begun at the Eastern State Hospital.

JOSEPH E. BARRETT
DAVID C. WILSON
R. FINLEY GAYLE
JAMES P. KING
FRANK H. REDWOOD, *Chairman*

Industrial Health

There have been no matters involving the duties of the Committee referred for consideration since its appointment, but your Committee wishes to present the following for the consideration of the Society, and makes its recommendation accordingly:

As industrial medicine involves an ever and growing field for the medical practitioner, especially in view of the accidental injuries and their residual effects and occupational diseases, your Committee believes it advisable to consider having the two State medical schools include in their curriculum a series of lectures on the Workmen's Compensation Law, paying particular emphasis to accidental injuries, their residual effects, occupational diseases, and a general idea of the administrative working of the Industrial Commission.

To this end, a series of lectures probably confined to one day and for the benefit of the senior class should be devoted to the fundamentals of the Workmen's Compensation Law and its administration by the Industrial Commission from a medical standpoint with a second day devoted to a clinic for the purpose of presenting physical exhibits for the purpose of evaluating residual effects of injuries and the medical problems in connection with the handling of these cases.

We recommend such a course and to this end make the recommendation that the matter be considered by the Society for such action as it may wish to take.

ALEXANDER MCCAUSLAND
W. B. BARTON
M. W. HEALY
J. V. JORDAN
H. U. STEPHENSON, *Chairman*

Cancer

As in the past, the Cancer Committee has acted as clearing house and recording center for patients treated in the various certificated Tumor Clinics. During 1947, it will have published five cancer bulletins in the VIRGINIA MEDICAL MONTHLY.

Each of the Tumor Clinics has sought approval from the American College of Surgeons and the report from the American College of Surgeons will be reviewed at the Annual Meeting of the Cancer Committee.

GEORGE COOPER, JR., *Chairman*

Advisory to Woman's Auxiliary

During the past year, the Committee Advisory to Woman's Auxiliary has not had a meeting. We have kept in close touch with the Auxiliary and whenever called upon have conferred with them concerning the various causes with which they work.

There have been no matters brought to the attention of the Committee which have necessitated a meeting.

LETA J. WHITE, *Chairman*

Rehabilitation

Your Committee held a meeting at the John Marshall Hotel, Richmond, on May 25. The need was explained of the Rehabilitation Division for medical advisors who are familiar with the limitations and the objectives of the service with reference to handling Physical Restoration cases that present unusual problems. Members of the Committee present felt that this need could be met by the various Committee members in the different sections of the State, and expressed their willingness to provide this advisory service. It was pointed out that the need for such advisory service would probably be limited to not more than two hours per week. It was planned to discuss this matter further if it was thought this advisory service should become burdensome.

An adjustment was suggested in the current fee schedule and it was felt by members of the Committee that fees for two or more operations performed at the same time should carry the full fee for the highest priced operation plus one-half the scheduled fee for the other operation.

A statement was prepared which showed the extent of the physical restoration phase of the rehabilitation program. A copy of this statement is included as a part of the report of this committee.

During the past year members of your Committee have consulted with various members of the staff of the Division of Rehabilitation on matters relative to physical restoration services for indigent adults undergoing rehabilitation. Dr. F. B. Stafford and the chairman of the committee attended the training conference of the Rehabilitation staff held at the Woodrow Wilson Rehabilitation Center, and participated in discussions concerning the utilization of the Center in extending rehabilitation services to severely handicapped persons.

These two tables show the growth and present extent of the physical restoration phase of the Rehabilitation

program. The figures shown for the 1946-47 fiscal year reflect the services that were authorized and in some instances the service has not been completed. The number shown as having completed the service and engaged in employment reflect their circumstances as of June 30, 1947.

TABLE I

	1944-45	1945-46
Total cases served	102	224
Total hospital days purchased	1745	3770
Average stay in hospital (days)	17.8	17.75
Total cost physical restoration service	$11,099.89	$ 29,293.41
Average cost per case	108.82	137.80
Cases rehabilitated in suitable work on wages	60	124
Cases rehabilitated as farmers or housekeepers (no wage from specific employer)	21	35
Cases in training	7	6
Other cases under supervision	10	42
Cases whose physical restoration programs have been extended	2	10
Cases deceased or closed as not feasible	2	7
Aggregate annual earnings of cases rehabilitated (first year of work only shown)	$84,604.00	$153,972.00

TABLE II

	1946-47
Total cases authorized	455
Total amount allocated for year	$ 65,647.30
Cases rehabilitated in suitable work on wages	143
Cases rehabilitated as farmers or housekeepers (no wages from specific employer)	80
Cases whose service is not complete or who are under supervision	232
Aggregate annual earnings of cases rehabilitated at wages	$169,322.40

ROY M. HOOVER, *Chairman*
GEORGE A. DUNCAN, *Secretary*
GEORGE B. SETZLER
FRANK B. STAFFORD
LEROY SMITH
PAUL D. CAMP
N. F. RODMAN
L. J. ROPER

Nutrition

No matters pertaining to Nutrition have been referred to the Nutrition Committee this year. Therefore a meeting of the Committee has not been held.

I. C. RIGGIN, *Chairman*

National Emergency Medical Service

This committee was only recently appointed upon request of the American Medical Association and no meeting has been held.

J. P. WILLIAMS

Delegates to Roanoke Meeting

The following delegates and alternates have been appointed from the component societies to the House of Delegates at Roanoke. If your Society has not reported, please ask your delegate to contact the Secretary before the meeting of the House of Delegates to be held at the Hotel Roanoke on Monday, October 13th, at 11:00 A. M.

Delegate	*Alternate*
Accomack	
Dr. J. L. DeCormis	Dr. R. J. White
Albemarle	
Dr. H. B. Mulholland	Dr. Roy Mason
Dr. E. P. Lehman	Dr. George Cooper, Jr.
Dr. J. E. Wood	Dr. McLemore Birdsong
Alexandria	
Dr. James W. Love	Dr. S. H. Williams
Alleghany-Bath	
Dr. W. J. Ellis	Dr. R. L. Claterbaugh
Dr. I. T. Hornbarger	Dr. S. P. Hileman
Arlington	
Dr. W. C. Welburn	Dr. C. P. Cake
Dr. W. P. Hammer	Dr. R. N. Sutton
Dr. G. J. Stuart	Dr. Leo Solet
Augusta	
Dr. Paul A. Woods	
Dr. Charles L. Savage	
Bedford	
Dr. C. R. Titus	Dr. J. G. Jantz
Botetourt	
Dr. E. B. Morgan	Dr. G. W. Wright
Buchanan-Dickenson	
Dr. D. F. Love	Dr. J. C. Moore
Dr. T. C. Sutherland	Dr. C. F. Reagan
Charlotte	
Dr. Stuart Wilson	Dr. Thomas Watkins
Culpeper	
Dr. D. W. Kelly, Jr.	Dr. J. B. Jones
Elizabeth City	
Dr. N. D. Nelms	Dr. Oscar W. Ward, Jr.
Fairfax	
Dr. H. G. Snead	Dr. T. B. McCord
Fauquier	
Dr. M. B. Hiden	Dr. W. R. Pretlow
Fourth District and Southside	
Dr. J. M. Habel	Dr. J. T. O'Neal
Dr. Clyde O'Brien	
Dr. T. H. Valentine	Dr. Frank Mallory
Dr. F. J. Wright, Jr.	Dr. Leta White
Dr. J. B. Kiser	Dr. L. P. Jones
Dr. W. D. Kendig	Dr. H. E. Whaley
Dr. Tyree Finch	Dr. L. H. Bracey
Dr. J. M. Hurt	Dr. W. P. Terry
Dr. H. B. Holsinger	Dr. W. E. Smith
Dr. W. M. Phipps	Dr. C. L. Saylor
Dr. B. H. Knight	Dr. F. E. Steere
Dr. M. Rosenberg	Dr. C. M. Babb

Delegate	*Alternate*
Fredericksburg	
Dr. Rogers Harris	Dr. G. B. Harrison
Dr. C. A. Reynolds	Dr. J. G. Broaddus
Dr. L. F. Lee	Dr. C. W. Sale
Dr. L. A. Busch	Dr. J. G. Willis
Halifax	
Dr. W. J. Hagood	Dr. W. D. R. Driscoll
Isle of Wight	
Dr. Ivan Steele	Dr. Rea Parker
James River	
Dr. E. J. Haden	Dr. W. A. Pennington
Dr. E. B. Nuckols	Dr. Nash Snead
Dr. J. H. Yeatman	Dr. L. W. Hulley
Lee	
Dr. T. S. Ely	Dr. J. H. Dellinger
Loudoun	
Dr. W. O. Bailey	Dr. W. W. Zimmerman
Louisa	
Dr. J. Langdon Moss	
Lynchburg	
Dr. H. H Hurt	
Dr. John T. T. Hundley	
Mid-Tidewater	
Dr. J. M. Gouldin	
Dr. A. L. Van Name	
Dr. R. D. Bates	
Dr. A. W. Lewis	
Dr. J. R. Parker	
Dr. C. Campbell	
Dr. H. A. Tabb	
Dr. J. R. Gill	
Nansemond	
Dr. W. H. Chapman	Dr. J. M. Habel
Norfolk	
Dr. W. B. Martin	Dr. W. P. Adams
Dr. N. F. Rodman	Dr. F. H. Redwood
Dr. M. S. Fitchett	Dr. M. S. Andrews
Dr. J. L. Rawls	Dr. K. K. Wallace
Dr. B. E. Harrell	Dr. T. N. Spessard
Dr. M. B. Savage	Dr. A. A. Burke
Northampton	
Dr. W. J. Sturgis, Jr.	Dr. S. K. Ames
Northern Neck	
Dr. E. T. Ames	Dr. W. N. Chinn
Dr. Paul Pearson	Dr. H. E. Sisson
Dr. R. E. Booker	Dr. C. Leonard Booker
Dr. C. T. Peirce	Dr. A. B. Gravatt, Jr.
Northern Virginia	
Dr. F. D. Whitworth	Dr. E. L. Grubbs
Dr. C. H. Iden	Dr. Frank Tappan
Dr. G. G. Crawford	Dr. F. C. Downey
Dr. B. B. Dutton	Dr. J. A. Miller
Dr. Elizabeth Cover	Dr. F. T. Amiss
Dr. Jas. G. Brown	Dr. J. P. Snead
Princess Anne	
Dr. Ira Hancock	Dr. W. L. Taylor
Richmond	
Dr. D. G. Chapman	Dr. Harry Walker
Dr. M. P. Rucker	Dr. M. M. Pinckney
Dr. T. D. Davis	Dr. Thomas Hughes
Dr. A. S. Brinkley	Dr. Leroy Smith
Dr. B. W. Rawles, Jr.	Dr. Lee Sutton
Dr. A. L. Herring, Jr.	Dr. J. R. Grinels
Dr. L. J. Roper	Dr. Bowie Shepherd
Dr. E. E. Haddock	Dr. James T. Tucker
Dr. John Lynch	Dr. L. J. Whitehead
Dr. Kinloch Nelson	Dr. E. M. Holmes
Dr. E. T. Gatewood	Dr. C. M. Caravati
Dr. Rex Blankinship	
Roanoke	
Dr. Paul Davis	Dr. Charles Irvin
Dr. Frank Farmer	Dr. Allen Barker
Dr. George Hurt	Dr. H. B. Stone, Jr.
Dr. Charles Peterson	Dr. R. M. Hoover
Rockbridge	
Dr. M. T. Vaden	Dr. E. P. Tompkins
Rockingham	
Dr. C. S. Armantrout	Dr. C. C. Powel
Russell	
Dr. J. W. Elliott	Dr. R. F. Gillespie
Scott	
Dr. W. L. Griggs	Dr. F. G. McConnell
Southampton	
Dr. E. F. Reese	Dr. R. L. Raiford
Southwestern	
Dr. Glenn Cox	Dr. T. H. Worrell
Dr. S. A. Tuck	Dr. M. C. Newton
Dr. E. S. Elliott	Dr. Beverley Eckles
Dr. J. J. Giesen	Dr. A. M. Showalter
Dr. D. S. Divers	Dr. W. F. Delp
Dr. R. D. Campbell	Dr. J. J. Eller
Dr. J. A. Wolfe	Dr. H. M. Hayter
Dr. C. D. Moore	Dr. S. W. Huddle
Tazewell	
Dr. Mary E. Johnston	Dr. A. W. Brown
Warwick	
Dr. W. R. Payne	Dr. Russell Buxton
Dr. E. B. Mewborne	Dr. A. A. Creecy
Williamsburg-James City	
Dr. J. E. Barrett	Dr. J. R. Parker
Wise	
Dr. N. H. Short	Dr. Thomas J. Tudor

TECHNICAL EXHIBITS

Technical Exhibits will be set up in the Palm Room, Corridor and Railroad Room. The following is a list of exhibitors with a brief description of each exhibit:

Booth No. 1

Peoples Drug Stores

Washington, D. C.

Our exhibit will feature a few of the latest preparations as supplied by the manufacturers having booths at the convention. Everyone in attendance is invited to visit us at Booth Number One.

Booth No. 2

Eli Lilly and Company

Indianapolis, Indiana

The Lilly exhibit this year features an interesting presentation on the heart and a discussion on cardiac drugs. Many Lilly products are to be on display; representative literature will be available. The attending Lilly medical service representatives will be pleased to assist visiting physicians whenever possible.

Booth No. 3

A. S. Aloe Company

St. Louis, Missouri

Our A. S. Aloe Company representative, Mr. J. Kettle, is anxious to show you the tremendous savings on fully guaranteed first quality government surplus instruments. Savings on these new instruments range up to 50 per cent. By all means look over these values at booth three.

Booth No. 4

Doak Company, Incorporated

Cleveland, Ohio

Doak Company exhibits nationally known dermatological preparations. Each preparation is based on the late advances in chemistry and research in dermatology. Latest additions to the Doak Company specialties: *Salinidol* (Salicylanilid, Hyamine and Carbowax water soluble paste), indicated in ringworm of scalp; *Titanium Dioxide Cream,* as sunscreen, ointment base; *Tarpaste,* carefully standardized distillate of true coal tar in zinc oxide and starch paste. Clinical material and literature available upon request.

Booth No. 5

The Borden Company

New York, New York

Gerilac, a vitamin-fortified powdered milk for well-rounded nutrition in convalescence, pre and postoperative diets, geriatrics, pregnancy and lactation, and soft and liquid diets. *Gerilac* has a pleasing bland taste and variety may be enjoyed by the addition of flavors, such as chocolate, etc. It may be served either as a beverage or used in cooking and baking.

Likewise exhibited will be our long established products for infant feeding: *Biolac, Dryco, Mull-Soy, Merrell-Soule Special Milks,* general purpose *Klim,* and *Beta Lactose.*

Booth No. 6

Parke, Davis and Company

Detroit, Michigan

Members of Parke, Davis and Company's Medical Service Staff, fully informed regarding the progress in pharmaceutical and biological research, and desirous of presenting various new advancements to you, will be on hand at our Technical Exhibit to discuss new and old products. Featured will be such outstanding specialties as—*Benadryl, Vitamins, Adrenalin, Oxycel and Thrombin, Topical.* Also the most recent types of biologicals, including other therapeutic agents af chemotherapeutic interest, will be displayed. We invite you to visit our exhibit while attending this meeting.

Booth No. 7

Reed & Carnrick

Jersey City, New Jersey

Mepranc, a new synthetic estogren which affords prompt relief of menopausal symptoms and imparts a sense of well-being without unpleasant side reactions, is being featured at the Reed & Carnrick booth. Literature and samples are available.

Booth No. 8

E. R. Squibb & Sons

New York, New York

Nutritional Depletion on Standard Hospital Diet: A scientific exhibit presenting new data on depletion of essential nutrients in patients on standard hospital diets; and measures suitable for the prevention of nutritional damage.

Booth No. 9

Tablerock Laboratories

Greenville, South Carolina

We invite the members of the Medical Society of Virginia to visit our exhibit during the meeting. Our representative will be glad to explain the line of prescription specialties we have to offer for your service.

Booths No. 10-11

Mead Johnson and Company

Evansville, Indiana

Amigen and Protolysate will be on display at the Mead Johnson exhibit at your Medical Society of Virginia Meeting. Mead Johnson has pioneered the amino acid field commercially; the products have been described in more than one hundred and forty articles in the medical literature; this year they are available. Trained representatives will be at the Mead Exhibit to discuss details of

the new amino acid products. Shown also will be Dextri-Maltose, Pablum, Pabena, Oleum Percomorphum and the other Mead Products used in Infant Nutrition. Protenum, a new high-protein product will be displayed. Also Lonalac for low-sodium diets.

Booth No. 12

Powers and Anderson

Richmond, Virginia

The Powers and Anderson exhibit will have the latest developments in equipment, supplies and instruments for the physician's office. All items shown will be the post-war models which are now available for delivery. Robert E. Anderson, Jr., Charles T. Brown, Jr., H. C. Haun, C. T. Kelley, and M. C. Thompson will be in charge of the exhibit.

Booth No. 13

Winthrop Chemical Company, Incorporated

New York, New York

Winthrop Chemical Company extends a cordial invitation to visit their booth where representatives will be on hand to discuss the latest therapeutic contributions made by this firm. Featured will be Demerol, powerful analgesic, spasmolytic and sedative; Digisidin, pure crystalline digitoxin, the drug of choice for precise digitalization, Neocurtasal, sodium-free seasoning agent and Salyrgan-Theophylline tablets, effective oral diuretic.

Booth No. 14

Philip Morris & Company, Incorporated

Richmond, Virginia

Philip Morris & Company will demonstrate the method by which it was found that Philip Morris Cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than other cigarettes. Their representative will be happy to discuss researches on this subject, and problems on the physiological effects of smoking.

Booth No. 15

Hoffman-La Roche, Incorporated

Nutley, New Jersey

Roche representatives will be in attendance to discuss *Prostigmin* and its many uses, particularly those of interest to the surgeon; *Berocca-C*, the new B-Complex and vitamin C preparation in ampul form for immediate use by injection; *Per-Os-Cillin*, the specially buffered penicillin tablet for oral use; and other Roche specialties in which visitors may be interested.

Booth No. 16

Ciba Pharmaceutical Products, Incorporated

Summit, New Jersey

Ciba Pharmaceutical Products invite you to visit their exhibit for latest information about *Pyribenzamine*, the effective antihistaminic used in the relief of symptoms of allergy. The representative in attendance will be glad to answer any questions about this and other Ciba products.

Booth No. 17

Sharp & Dohme, Incorporated

Philadelphia, Pennsylvania

Sharp & Dohme extends a cordial welcome to all visitors at their booth. New antibiotic preparations including *Prothricin*, nasal decongestant, and *Tyroderm*, tyrothricin cream, are being featured along with *Sulfathalidine* and *Sulfasuxidine*, intestinal bacteriostatic agents. *Cremosuxidine*, *Lyocyte* Powder, dried human blood cells and *Lyovac* normal human plasma complete the items on exhibit.

Booth No. 18

Schering Corporation

Bloomfield, New Jersey

The Schering booth will feature the potent oral estrogenic hormone, *Estinyl* (ethinyl estradiol) the oral progestin, *Pranone* (anhydrohydroxyprogesterone) and the oral androgen, *Oreton-M* (methyltestosterone). The well-known parenteral hormones *Oreton* (testosterone propionate); *Pregynon-B* (estradiol benzoate), *Proluton* (progesterone), and *Cortate* (desoxycorticosterone acetate) will also be displayed. The new effective treatment for ophthalmic infections, *Sodium Sulfacetimide Solution 30%* will be of interest as will be the clinically safer sulfonamide combination *Combisul-TD* and the radiographic media *Priodax* and *Neo-Iopax*. Schering Professional Service Representatives will be present to welcome physicians' inquiries.

Booth No. 19

Bilhuber-Knoll Corporation

Orange, New Jersey

For the latest on the fine medicinal chemicals of the Bilhuber-Knoll Corporation, visit Booth No. 19. Their display includes the new vasopressor, Oenethyl; antispasmodic, Octin; sedative and mild hypnotic, Bromural; analgesic and cough sedative, Dilaudid; analeptic and antianoxiant, Metrazol; and myocardial stimulant and diuretic, Theocalcin, as well as other dependable prescription chemicals. They are prescribed alone or in combination to meet the individual patient's requirement.

Booth No. 20

VanPelt and Brown, Incorporated

Richmond, Virginia

VanPelt and Brown will exhibit a number of their leading pharmaceutical specialties. Mr. George J. Hulcher will be in charge. We are looking forward to greeting our many friends during this meeting.

Booth No. 21

Meridian Electronic Equipment Company

Richmond, Virginia

This display will feature the most recent developments in sound and inter-communication equipment. Application of this equipment to office and hospital use will be demonstrated, proving the manner in which it increases efficiency of the busy practitioner. Guests and members are invited to make recordings without charge.

Booth No. 22
C. B. Fleet Company, Incorporated
Lynchburg, Virginia

C. B. Fleet Company cordially invites you to stop by Booth No. 22 for a short visit with Mr. L. S. Matthews, the representative who sees you in your office about once a year. Perhaps there is something about *Phospho-Soda (Fleet)*, the pure, stable, aqueous concentrate of the two U.S.P. Sodium Phosphates, you would like to discuss with him.

Booth No. 23
U. S. Vitamin Corporation
New York, New York

Full color illustrated brochure "Diagnosing Vitamin Deficiencies" together with professional samples and literature on *Vi-Syneral, Poly-B, Vi-Litron, Hypervitam, Lipo-Heplex, Dalsol, Desiver, Amiprote, Rutin, Methischol* and others.

Booth No. 24
Doho Chemical Corporation
New York, New York

The makers of *Auralgan* are introducing at this meeting their new sulfa drug preparation, *O-Tos-Mo-San*, indicated in the treatment and control of chronic suppurative ears. Our representatives will be happy to explain, in detail, the workings of these medications. Also, *Rectalgan*, the new liquid topical anesthesia for the relief of pain and itching in hemorrhoids and pruritus.

Booth No. 25
Valentine Company, Incorporated
Richmond, Virginia

The Valentine Company exhibit features the company "V" in sandalwood, overhanging, upon which the company's products are displayed. This "V" is backed with royal purple drapery matching the display counter cloth. The display counter features Valentine products in "V" formation with the apex of the "V" in convergence with that of the overhanging emblem.

Booths No. 26-27
Camel Cigarettes
New York, New York

Camel cigarettes will present a dramatic full color review of their recent medical research on smoking, as well as the details of the nationwide survey showing that "More Doctors Smoke Camels Than Any Other Cigarette". Another panel will illustrate the absorption of nicotine in the respiratory tract. Representatives will be present.

Booth No. 28
General Electric X-Ray Corporation
Richmond, Virginia

Display will consist of x-ray accessories and physical therapy equipment.

Booth No. 29
J. B. Lippincott Company
Philadelphia, Pennsylvania

For those who write and produce technical books in the field of medicine there is imposed a definite obligation to have each printed page present dependable, well-documented facts. It is this recognized mastery of subject matter which lends authority and usefulness to *Lippincott Selected Professional Books.* Lippincott authors are leaders in their fields. Their writings, based on active clinical experience, fill a definite need in the literature. These books will be on display at Booth 29.

Booths No. 30-31
The Liebel-Flarsheim Company
Cincinnati, Ohio

The Liebel-Flarsheim Company cordially invites you to stop at their booths for examination and demonstration of our latest model diathermy and electro-surgical apparatus. Capable representatives will be on hand at all times to answer your questions about physical therapy and electrosurgical apparatus. We hope you will stop by so we may become acquainted.

Booth No. 32
Holland-Rantos Company, Incorporated,
New York, New York

At Booth No. 32, you will find on display: *Koromex Contraceptive Specialties*—The Koromex Set Complete, a convenient unit, diaphragm, introducer, jelly and cream; *Nylmerate Jelly*—Contains phenyl mercuric acetate; a new and effective treatment for trichomoniasis and non-specific leucorrhea; and *Electro Jelly*—for use with electrocardiographic and electroencephalographic equipment in shock therapy. Representatives will be pleased to discuss products of particular interest to you.

Booth No. 33
Lanteen Medical Laboratories, Incorporated
Chicago, Illinois

Lanteen Medical Laboratories cordially invite you to their exhibit of well known line of pharmaceutical specialties. Included will be *Procarmin,* an autolytic protein hydrolysate, as well as other gynecic specialties.

Booth No. 34
William P. Poythress & Company, Incorporated
Richmond, Virginia

A cordial welcome awaits you at the Poythress exhibit booth. Descriptive literature on Solfoton, T C S, Uro-Phosphate, Merpectogel, Panalgesic, and other Poythress preparations will be available. Trial supplies of each of these preparations may also be arranged for upon your request.

Booth No. 37
Ortho Pharmaceutical Corporation
Raritan, New Jersey

Ortho Pharmaceutical Corporation cordially invites you to visit Booth No. 37, where they will exhibit their well-

known line of Gynecic Pharmaceuticals. Triple Sulfa, for bacterial vaginitis and Nidoxital, for nausea and vomiting of pregnancy will be features. Samples and literature on all products will be available.

Booth No. 38

A. H. Robins Company

Richmond, Virginia

Mr. E. K. Rose, the Virginia representative for A. H. Robins Company, will be on hand to discuss a number of new products which have recently been released. All requests for samples, literature and other reprints will be given very prompt attention.

It will be a pleasure to participate in the annual meeting of the Medical Society of Virginia once more.

Booth No. 39

G. D. Searle & Company

Chicago, Illinois

You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle Products of Research. Featured will be Hydrylin, the new antihistaminic, as well as such time-proven products as Searle Aminophyllin in all dosage forms, Metamucil, Ketochol, Floraquin, Kiophyllin, Diodoquin, Pavatrine and Pavatrine with Phenobarbital.

Booth No. 40

Smith, Kline & French Laboratories

Philadelphia, Pennsylvania

Eskay's Oralator is featured at this exhibit. Eskay's Oralator provides a revolutionary method of cough control. Inhale by *mouth*, the Oralator's anesthetic-analgesic vapor (2-amino-6-methylheptane) is delivered directly to the nerve endings in the trachea and larynx, where it controls cough within a matter of seconds. Safe and effective, the Oralator is indicated in those types of coughs for which codeine would ordinarily be prescribed. Unlike sedatives and narcotics, however, the Oralator produces no appreciable systemic effects.

Our specially trained professional representatives will be glad to answer all questions concerning the possible uses of our products in your practice.

Booth No. 41

White Laboratories, Incorporated

Newark, New Jersey

White's Dienestrol Tablets (Council Accepted)—a new orally effective synthetic estrogen is featured. Complete information and literature are available regarding the advantages of Dienestrol's high biologic activity, excellent patient-tolerance and economy.

Other products of White Laboratories are on display and White's Medical Service Representatives in attendance will be pleased to supply any further information requested.

Booth No. 42

Zimmer Manufacturing Company

Warsaw, Indiana

Visit the Zimmer booth for the latest in fracture equipment, bone instruments and orthopedic appliances. We will display the new Eggers Type Bone Plates, Intra-Medullary fixation pins, Stryker's Electric Cast Cutter, and the new Caesar Toe-Drop Brace which is unique in design and exclusive with the Zimmer Company.

Booth No. 43

Lederle Laboratories

New York, New York

Lederle Laboratories will provide an up-to-date display covering several of the recent advances in medicine contributed by this company. Folvite folic acid will be shown in its original tablet form as well as in an elixir suitable for dosage in children. Folvron, containing both folic acid and ferrous sulfate will likewise be shown.

Alcohol refinement will be shown in its application to the preparation of diphtheria and tetanus toxoids. The highly accurate new syphilis diagnostic involving the Cardiolipin Lecithin Cholesterol mechanism will be displayed. In addition, protein nutrition and its relation to Ledinac, a protein hydrolysate, will be discussed.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President ..... MRS. J. E. HAMNER, Petersburg
President-Elect ..... MRS. J. L. DECORMIS, Accomac
Recording Secretary ..... MRS. M. H. HARRIS, West Point
Corresponding Secretary,
MRS. MEADE EDMUNDS, Petersburg
Treasurer ..... MRS. REUBEN SIMMS, Richmond
Editorial Chairman ..... MRS. E. HOLLAND TROWER, Eastville

Annual Meeting.

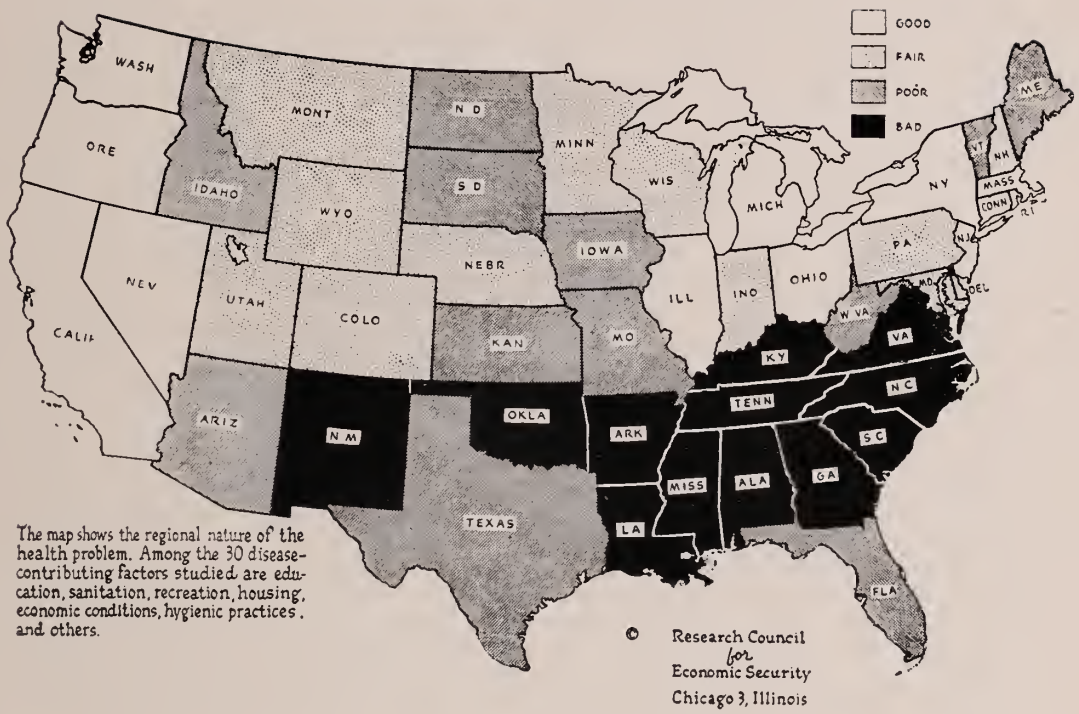
The Twenty-fifth Annual Meeting of the Woman's Auxiliary to the Medical Society of Virginia will will be held at Hotel Roanoke, Roanoke, on Tuesday, October 14th.

A most cordial invitation is extended to all women who are Auxiliary members or guests of physicians attending the convention of the Medical Society of Virginia to participate in all social functions and attend the general session. Auxiliary members or not, wives of doctors will be most welcome.

Each lady is urged to register promptly upon arrival in Roanoke.

EDITORIALS

Our National Health Problem



The map shows the regional nature of the health problem. Among the 30 disease-contributing factors studied are education, sanitation, recreation, housing, economic conditions, hygienic practices, and others.

Health Expenditure

IN Health expenditure as measured by the expenditures of State governments, Virginia ranked 27th. Virginia expended $1.03 per capita as against Nevada's $2.35. The health problem is a complex factor. In preceding editorials on the National Health Problem we have shown how Virginia's population is largely rural and about one-fourth negro; that the family in Virginia is large and the income is small; that a large percentage of the houses need major repairs and a larger percentage have no sewer connection; that her medical facilities are not up to the average in quantity; and that draft rejections were high along with illiteracy. The only good feature in the picture is her climate and that does not show on the map. We had gotten this far in our editorial and were searching our mind for a strong appeal for the expenditure of more funds for health work, when we stopped to hear "Doctors Then and Now" and over the air came the voice of our good neighbor Wingate Johnson with a tinge of justified boastfulness saying that North Carolina had the lowest death rate of any State in the nation and that Virginia's death rate was almost as low. Here was indeed an Irish bull. Virginia was spending ridiculously little on health and yet was a top ranking state in low death rates. The explanation is simple. Ever since the Civil War, Virginians (and North Carolinians) have been poor. They have gotten used to it and make the best of it. They have learned to make a dollar go a long way and they have been getting more for their health dollar than most of the States, which is after all an excellent reason for giving the Health Department more money to spend. Unless this is done so that salaries can be brought in line with

increases everywhere else, Virginia cannot hope to attract and hold the kind of health personnel that we have had and need. Many areas in the State are without public health service and others operate with minimal staffs and consequent thinning of service. North Carolina with similar conditions spends $1.25 against Virginia's $1.03 and North Carolina has the lowest death rate of any state. In 1944 there were seven states with lower death rates than Virginia's, and this should not be.

The Annual Meeting

THE one hundredth annual meeting of the Medical Society of Virginia will be held in Hotel Roanoke, Roanoke, Virginia, October 13th, 14th and 15th. In the September *Monthly* there was published a list of the presidents with the years in which they presided. It will be noted that while there have been 99 meetings, there have been only 91 presidents. Drs. William Foushee, H. C. Worsham and R. S. Payne were each elected for a second term. Dr. Haxall and Dr. Patteson not only served two terms in succession, but were elected for a third term after a lapse of several years. More recently Dr. Ennion Williams served two years, in the first of which (1918), owing to the influenza epidemic during world War I there was only an abbreviated meeting of the Council. In 1849 there was a regular meeting but no record of who was president. This was between the two third terms of Dr. William A. Patteson and Dr. William Haxall. It is quite possible that one or the other of these presided, and as it was so commonplace for them to preside, no note was made of it.

The first meeting was held in 1821. In 1824 the meetings were discontinued until 1841. Again after the session of 1858 the Society became dormant. In 1870 it was revived under the leadership of Dr. Landon B. Edwards, who for years was the secretary of the Society and the owner and editor of its journal. Thus it can be truly said that we will be celebrating our one hundredth meeting but not our centenary. Owing to the several reorganizations the date of our one hundredth anniversary passed unnoticed.

The program as published in the September *Monthly* speaks for itself. There is not only a variety of excellent scientific papers, but there are a number of historical papers as befitting the occasion. Special social features have been arranged for this, as the hundredth meeting of the Society. There will also be an exhibit of medicine in the olden days, which will be in charge of the Woman's Auxiliary. Our meetings in Roanoke are always enjoyable. This year the Roanoke doctors are preparing for a banner session.

Dr. Sigerist Retires

DR. Henry E. Sigerist has resigned as Professor of the History of Medicine at Johns Hopkins and has retired to his native Switzerland in order to complete an eight volume history of medicine. He refers to the sixteen years when he was the first William H. Welch Professor of the History of Medicine as the happiest years of his life. While he was with us he became a thorough American. A criticism of his *The Great Doctors* which he wrote when he was an European was that only two Americans were included. At that time he evidently thought more of Paracelsus di Bombast than he did of Walter Reed.

Dr. Sigerist is nothing if he is not thorough. When he is interested in a country he lives in it and learns its language. He has lived all over the world, Cape Town, Australia, India, and, of course, Germany and Italy. Before he wrote his book on Soviet Medicine he lived in Russia and learned to speak at least one of the languages of the Russians. The only field in medicine that he has not explored is the private

practice of medicine. He has never had the thrill of working out the correct diagnosis of a complicated case, nor of relieving the suffering of a human being and occasionally of saving a life. He has never been sick himself so he has had no first-hand knowledge of the physician-patient relationship. Perhaps he can be forgiven therefore for his leaning towards socialized medicine.

Those of us who have followed Sigerist's great work in this country—the development of a department of the History of Medicine on a University level and the establishment of the Annals of Medical History—will follow with interest his new venture. As he says Italian Switzerland is not so far and he describes his old-new home in such glowing terms that many of us will want to visit him. His History of Medicine will be different from any hitherto published. He is approaching the subject from the socialist aspect rather than from the usual bio-biographical one. He is more interested in the health and habits of a people than in who discovered gall-bladder disease and when. Arrangements have already been made for the publishing of one volume a year. Good luck to you, Dr. Sigerist, but not farewell!

Tiffany Johns Williams
1897-1947

IN the untimely death of Dr. Tiffany J. Williams on August 19th, the State of Virginia and the University of Virginia suffered an irreparable loss. Dr. Williams died of the doctors disease, coronary thrombosis. A native of Maryland, he graduated in medicine at Johns Hopkins University in 1923. He served as interne in the Johns Hopkins Hospital and in the Sloane Hospital for Women in New York. In 1925-26 he was resident in the New Haven Hospital and instructor in obstetrics and gynecology at Yale. In 1926-29 he was instructor at the University of Iowa and subsequently was connected with a clinic in Grand Falls, Montana. In 1931, when Dr. Bayard Carter resigned the professorship of Obstetrics and Gynecology at the University of Virginia to go to Duke, he recommended as his successor Dr. Tiffany Williams under whom he had served in the New Haven Hospital in 1925-26.

Dr. Williams entered into his new position at Virginia whole-heartedly and enthusiastically and at the time of his death was regarded by the medical faculty as being invaluable and of great stabilizing influence. He took an active interest in the Medical Society of Virginia and served faithfully on its Maternal Welfare Committee from 1932 to 1944 and was its chairman in 1943-44. Anything that had to do with bettering obstetrics and gynecology received Tiffany Williams' energetic support. He attended all the meetings of the Virginia Obstetrical and Gynecological Society and was a member of the Americal Association of Obstetricians, Gynecologists and Abdominal Surgeons and of the South Atlantic Association of Obstetricians and Gynecologists. Of the latter Association he was secretary during the trying war years and was its president-elect at the time of his death.

His last paper, read by invitation before the American Gynecological Society throws great light upon the character of the man. By nature and training he was conservative in his thinking, but when convinced of the reasonableness and value of a procedure he was quick to adopt it. So when Herman Johnson of Houston, Texas questioned the present method of treating placenta previa as an obstetrical emergency and Macafee of Belfast showed that an ill-advised and premature vaginal examination often made an emergency out of a case that would have otherwise gone to term, Williams adopted his method. It was in essence, to admit the patient to the hospital and study her medically, making provision for the replacement of blood should it be

necessary. If the pregnancy had not reached term, no vaginal nor rectal examination was done. Often under favorable circumstances, the patient was permitted to leave the hospital and return for delivery at a time when the baby would have a better chance of surviving. He reported on 41 patients treated in this manner. There was no maternal mortality and a fetal mortality of 12% in comparison with 28% under the standard plan. The paper was discussed by many Fellows who thought it was dangerous not to deliver the mother as soon after the hemorrhage as possible and the idea of permitting her to leave the hospital undelivered was obstetrical heresy. Dr. Williams answered his critics with calmness and dignity—the facts were on his side.

SOCIETIES

The Accomack Medical Society

Met on August 14, in Onancock, at which time Mr. Henry S. Johnson, Director of Public Relations of the State Society, was guest speaker, and was introduced by Dr. Rooker White, president. The gathering included members of the Northampton County Medical Society and members of the Woman's Auxiliary of both societies. Mrs. J. L. DeCormis of Accomac is president-elect of the State Auxiliary. Refreshments and a social hour followed the address and round table discussions.

JAMES CORBIN DOUGHTY,
Secretary.

Alexandria Medical Society.

At its regular meeting on September 11th, this Society was addressed by Mr. Theodore Wiprud, Executive Secretary of the Medical Society of the District of Columbia, who stressed the fact that medical societies must take a more active role in public relations and education. The discussion was both timely and authoritative. Several physicians were elected to membership at this time. Dr. Harrison Picot is president and Dr. George Speck secretary of the Society.

Augusta County Medical Association.

The regular quarterly meeting of this Association was held at Staunton on August 6th, at which time the following papers were presented: Indications and Use of Artificial Pneumothorax in Treatment of Pulmonary Tuberculosis by Dr. Thomas N. Hunnicutt, Jr., Newport News; and a brief report on Spontaneous Pneumothorax and Presentation of Two Cases by Dr. C. F. Gaylord, Staunton. There was a brief business meeting and supper followed at the Ingleside Hotel.

Dr. Leland C. Brown, Staunton, was elected president; Drs. Charles L. Savage, Waynesboro, H. Joseph Williams, Staunton, and James B. Pettis, Staunton, vice-presidents; Dr. Charles F. Gaylord, Staunton, secretary; Dr. John E. Womack, Staunton, treasurer; and Dr. Harold B. Webb, Waynesboro, censor.

Fairfax County Medical Society.

At the August meeting of this Society, the following were elected officers for the coming year: President, Dr. H. Garnett Snead, Falls Church; vice-president, Dr. F. R. Klune, Lorton; secretary, Dr. Nelson Podolnick, Falls Church; and treasurer, Dr. E. Newman, Vienna.

Halifax County Medical Society.

Officers of this Society for the current year are: President, Dr. W. J. Hagood, Clover; vice-president, Dr. N. H. Wooding, Halifax; and secretary-treasurer, Dr. Wm. C. Brann, South Boston.

Norfolk County Medical Society.

This Society at its annual meeting held prior to adjourning for the summer months, elected the following officers for the ensuing year: President, Dr. Millard B. Savage; president-elect, Dr. Benjamin A. Doggett; vice-president, Dr. H. W. Rogers; secretary, Dr. Walter P. Adams; treasurer, Dr. B. L. Parrish. All officers are of Norfolk.

The Smyth County Medical Society

Held its monthly meeting as guest of the Kiwanas Club of Saltville, on September 18. We were entertained by Mr. Vint Rector who performed many and varied magic tricks. Dr. C. C. Hatfield presented various interesting mechanical devises of both diagnostic and therapeutic nature which should prove to be of great value to general medical practice.

RICHARD C. POTTER, *Secretary*

NEWS

A. M. A. Will Honor General Practitioner.

The Board of Trustees of the American Medical Association has established a special gold medal for a general practitioner who has rendered exceptional service to his community.

The award, similar to the American Medical Association's Distinguished Service Medal which has been given annually since 1938 for scientific advancement in the field of medicine, will be given to a general practitioner for the first time at the supplemental session of the House of Delegates at Cleveland, Ohio, on January 7, 1948.

Designed especially for the physician who has served his people as a family doctor and who does not devote himself exclusively to a specialty in medicine, the award will be known as "the medal of the American Medical Association for exceptional service by a general practitioner."

Nominations for the award may be submitted to the headquarters office of the American Medical Association in Chicago by any state medical association or community service club, such as a Rotary, Kiwanis or Lions Club, Chamber of Commerce, woman's club, community council or similar group. The nomination should include the name and address of the physician, his scholastic record and a record of his medical service in the community. Nominations will be submitted to the executive committee of the Section on General Practice of Medicine of the American Medical Association. This committee will select five leading candidates for nomination for submission to the Board of Trustees, which, in turn, will nominate three of these to the House of Delegates. On the opening day's meeting at the supplemental session the House of Delegates will choose by ballot the general practitioner who will receive the medal.

The Southern Medical Association

Will hold its annual meeting in Baltimore during Thanksgiving week, November 24-26. Registration, the majority of the meetings and the scientific and technical exhibits will be held at the Fifth Regiment Armory on Hoffman Street and other meetings will be conducted at the home of the Medical and Chirurgical Faculty of Maryland and the Baltimore City Society.

Hotel reservations should be made through the Hotel Committee, Southern Medical Association Meeting, 1714 O'Sullivan Building, Baltimore 2, Maryland. Persons who plan to attend the meeting should make their reservations immediately through this committee as hotels will make no reservations directly with physicians.

Dr. Hutcheson Honored.

Dr. J. Morrison Hutcheson, Richmond, a former president of the Medical Society of Virginia, was again honored recently by Hampden-Sydney College when they conferred upon him the honorary degree of LL.D.

Personnel Changes, State Department of Health.

Dr. Richard H. Laning has been appointed Health Officer of the newly organized Amherst-Nelson District which was created, effective September 1. His headquarters are in Amherst.

Dr. Richard T. Arnest has been appointed Health Officer of the Northern Neck Health District created October 1. This district will comprise the counties of Westmoreland, Richmond, Lancaster, and Northumberland with headquarters at Warsaw. District offices will be maintained at Montross, Heathsville, and White Stone.

Dr. Thomas F. McGough, Health Officer in charge of the Elizabeth City-Warwick County Health District, and Dr. H. D. Crow, in charge of the Nansemond-Suffolk-Isle of Wight Health District, will both be on terminal leave, effective September 24, in order to take post-graduate work at the Johns-Hopkins School of Public Health.

Dr. R. S. Griffith Takes Down His Sign.

Dr. Griffith, dean of Waynesboro physicians, on August 1st removed his sign from the yard of his home on Delphine Avenue. This sign had been up since April 1, 1891—56 years. Dr. Griffith began his practice of medicine in Maryland in 1884 and came to Waynesboro in 1891.

The Hospital Program.

The Hospital Survey and Construction Act, which became law in August 1946, has launched the most comprehensive program in the history of this country for the construction of hospitals and health facilities. To help communities realize the benefits of this legislation, the U. S. Public Health

Service has just issued a series of five pamphlets.

"The Hospital Survey and Construction Act" is a summary of the law and regulations. "Why We Need More Hospitals" gives the story of hospital needs in this country. "The Hospital Act and Your Community" tells in simple terms what the program means to states and communities. "Hospital Quiz" is a series of questions and answers on hospital planning. "What is a Hospital System?" describes a coordinated hospital system, intended to extend the scope of hospital care. Sample copies of these pamphlets are available free on request to the U. S. Public Health Service, Washington 25, D. C.

War Aftermath Hampers German Civilian Medicine.

German medicine, once among the finest in the world, has fallen to an almost unbelievably low estate. The load of patients is greater than ever before. Many of the hospitals and laboratories are in ruins. Some of the foremost physicians and medical scientists, closely associated with the Nazi regime, still are in concentration camps. This is the word brought back from Germany by Major General Raymond W. Bliss, Surgeon General of the Army, who has just returned from inspecting American military medical installations beyond the Rhine. There is an extreme shortage of everything needed to care for the sick.

"The doctors may be politically minded", General Bliss said, "but they work now from seven in the morning until eleven at night, so that any political activity must come between the hours of 11:00 P. M. and 7:00 A. M."

General Bliss now has in mind setting up a residency training program for young American Medical Corps officers now stationed in Germany which not only would be of considerable value to the men themselves but would be some aid in the increasingly serious German situation.

Some of the army doctors, many of whom have just started on their professional careers, are acquiring limited experience because of the type of patients—American soldiers in excellent physical condition whose ailments usually are of the acute, short duration type. General Bliss would like to see them exposed to the vast amount of clinical material available in the German civilian hospitals.

"We have a large hospital with some 750 patients in the same immediate area with a German children's hospital where they have 500 to 600 patients," General Bliss said. "Our people are not taking full advantage of the clinical opportunities in the German hospital, and some kind of resident program should be worked out."

The same situation, he explained, exists in several centers where troops are stationed. A cooperative program, he feels would help both the army doctors and the German patients.

New Trustee of the A. M. A.

Dr. Wingate M. Johnson. professor of clinical medicine at the Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carclina, has been appointed to fill the unexpired term of the late Dr. Charles W. Roberts, deceased, on the Board of Trustees of the American Medical Association. Dr. Johnson is a past president of the Medical Society of the State of North Carolina and is Editor of its journal. He is chairman of the Section on General Practice of Medicine of the American Medical Association.

Community Chest Drives.

Community Chests in cities and towns all over Virginia are gearing for the 1947 Campaign drives. Last year $2,217,149 were raised by voluntary contributions in eleven Virginia communities.

Money raised in these annual drives support the Red Feather agencies year round, giving service on a twelve-month basis. The democratic principle of Community Chests, "Everybody Benefits—Everybody Gives" expresses the philosophy of a modern chest, the services which include a broad program of community services, used, enjoyed and financially supported by old and young, rich and poor, of all classes, races and creeds.

The Community Chests of Virginia speak to the citizens of the Old Dominion with a united voice, being the means whereby each community can take care of its own problems.

Van Meter Prize Award.

The American Association for the Study of Goiter again offers the Van Meter Prize Award of Three Hundred Dollars and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The Award will be made at the annual meeting of the Association which will be held in Toronto, Canada, May 6th, 7th, 8th, 1948 providing essays of sufficient merit are presented in competition.

The competing essays may cover either clinical or research investigations; should not exceed three thousand words in length; must be presented in English; and a typewritten double spaced copy sent to the corresponding secretary, Dr. T. C. Davison, 207 Doctors Building, Atlanta 3, Georgia not later than February 1st, 1948.

General Denit Appointed First Army Surgeon.

Brigadier General Guy Blair Denit, thrice decorated for his outstanding performance as Chief Surgeon of General MacArthur's Pacific Forces, has been assigned as Surgeon of First Army. He is a native of Salem, Virginia, and a graduate of Virginia Polytechnic Institute and the Medical College of Virginia. General Denit began his Army career as first lieutenant in the Medical Corps of the Virginia National Guard in 1915, and joined the Regular Army in February 1918.

The American College of Physicians

Will conduct its 29th Annual Session at San Francisco, April 19-23, 1948. General Headquarters will be at the Civic Auditorium. Dr. William J. Kerr and Dr. Ernest H. Falconer, both of San Francisco, are the Co-Chairmen for local arrangements and the program of Clinics and Panel Discussions. The President of the College, Dr. Hugh J. Morgan, Professor of Medicine at Vanderbilt University School of Medicine, Nashville, Tennessee, is in charge of the program of Morning Lectures and afternoon General Sessions.

Virginia Council on Health and Medical Care.

Mr. William Shands Meacham, recently parole director of the National Probation Association, but former chairman of the Virginia Parole and Pardons Boards, has been appointed director of the Virginia Council on Health and Medical Care, and entered upon his new duties on September 15. He will endeavor to coordinate the interests and activities of the 60-odd State and local agencies and organizations which now make up the Council membership, and to carry out the Council's decisions on program and plans.

The Virginia Obstetrical and Gynecological Society

Will hold its annual meeting on October 14th at the Hotel Roanoke. There will be a luncheon and business meeting for members, followed by an open meeting to which all members of the medical profession are invited. Dr. M. P. Rucker of Richmond and Dr. C. D. Bradley of Newport News will give a full report of their visit to the Rotunda Lying-In Hospital of Dublin, Ireland, in connection with the Bicentenary of the Hospital. There will also be papers and discussions on the Rh factor. The program will be of interest not only to obstetricians and gynecologists but also to general practitioners.

Gill Memorial Spring Graduate Course.

In addition to those announced in the September issue of the Monthly, the following will be guest speakers at the annual Spring Graduate Course of the Gill Memorial Hospital, Roanoke, April 5-10: Dr. Bayard T. Horton, Rochester; Dr. John Hugh Tucci, Boston; Dr. C. Stewart Nash, Rochester; Dr. Grant E. Ward, Baltimore; Dr. Henry M. Goodyear, Cincinnati; Dr. George E. Shambaugh, Jr., Chicago; Dr. H. J. Moersch, Rochester; Dr. H. B. Haag, Richmond; and Dr. Oscar M. Marchman, Dallas.

Virginia Doctors Attend Congress.

Among Virginia Physicians attending the Third American Congress on Obstetrics and Gynecology in St. Louis, September 8-12, were: Drs. M. H. Bland, B. D. Jones, Jr., and R. B. Nicholls of Norfolk; Drs. A. L. Carson, Jr., W. T. Moore, W. H. Rogers, E. C. Schelin and L. L. Shamburger of Richmond; Dr. Mary Elizabeth Johnston of Tazewell; Dr. S. E. Oglesby of Lynchburg; and Dr. Waverly R. Payne of Newport News.

Medical Symposium at Duke.

Duke University and the Staff of Duke Hospital will have their tenth annual Medical Symposium on Friday and Saturday, October 17 and 18. Sessions on two mornings and one afternoon will be given up to discussions of Peptic Ulcer, Ulcerative Colitis, and Diseases of the Pancreas. Dr. Stewart Wolf of New York Hospital will give an address on Friday evening on Certain Functions of the Stomach, and Dr. Richard Swett of Boston an address on Surgery of the Esophagus. The scientiffc program will adjourn at noon on Saturday, to permit those present to attend the Duke-Maryland football game scheduled for that day. Tickets for the game may be obtained by writing to the Duke Athletic Office.

Post-Graduate Course in Heart Disease.

Twenty-seven doctors from Virginia, West Virginia, North Carolina, and Florida enrolled in a post-graduate course in heart disease offered at the Medical College of Virginia September 8-20. The course, sponsored by the Department of Continuation Education and directed by Dr. Reno Porter and Dr. Nathan Bloom of the college, was the first such course to be offered at the Medical College. It covered all phases of heart disease with an emphasis on new advancements in diagnosis and treatment and was conducted by members of the medical staff of the college. It was offered by the college in an effort to give practicing physicians an opportunity to keep abreast of the latest developments in the field of heart disease and to afford others an opportunity for additional study.

Physician Wanted.

The du Pont Company has an opening for a full time physician at its Richmond Plant. Office Work only on Monday through Friday Schedule. Apply in person or by mail to Employment Supervisor, E. I. du Pont de Nemours and Company, P. O. Box 1477, Richmond 12, Va. *(Adv.)*

OBITUARIES

Dr. William Thomas Potter,

Ocean View, died July 17th, at the age of fifty-nine, after nearly twenty-one years of almost total paralysis. Early one morning in 1926 he was awakened by the ringing of his phone and in answering it fell, fracturing his neck. Following three unsuccessful operations, he cheerfully resigned himself to a fate of lying on his back, helpless except for his ability to see, hear and speak. Dr. Potter was a native of North Carolina and graduated from the Medical College of Virgina in 1910. He practiced for sometime in North Carolina before locating at Ocean View in 1920. He was a member of the Medical Society of Virginia, having joined in 1922. His wife, a son and a daughter survive him.

Dr. William Harvey Bruce,

Formerly of Pennington Gap, died the latter part of July, having been in poor health for some time. He was fifty-nine years of age and a graduate in medicine from the University of Louisville in 1912. His wife and two children survive him.

Resolution on Death of Dr. Chapman.

Dr. Thomas E. Chapman was born March 22, 1877, near Lebanon, Virginia. At the age of fourteen his family moved to Norton. There he went to work for the Norfolk and Western Railroad as call boy. He worked at night and went to school during the day; by hard and faithful work, he became telegraph operator, and later yard master at the Norton terminal. He held this position until he was twenty-two years of age, when he resigned to enter Medical School, and graduated from the Kentucky School of Medicine in 1904.

He located at Norton, and for a while was associated with the late Dr. M. L. Stallard. He had the unique record of having been licensed and practiced in the following States, Virginia, Texas, Kentucky, Indiana, Arkansas Missouri, Oklahoma, Wyoming and California.

He was a veteran of World War I and, when being examined for over sea duty, was found to have high blood pressure and was honorably discharged on October 8, 1918.

In 1926, he took a course in Eye, Ear, Nose and Throat, at Chicago, and specialized in this field until his recent illness.

He was a Mason, a Presbyterian, and a member of the American Legion. He was a member of the Wise County Medical Society before he left Virginia and after his return; was President of same for 1908. He very seldom missed a meeting of the society and the members, especially the older ones, will remember his witty remarks, gracious smile and friendly handshake.

THEREFORE, BE IT RESOLVED, that this humble tribute to our friend and fellow member be written into the minutes of the Wise County Medical Society, and that a copy be sent to the VIRGINIA MEDICAL MONTHLY, and a copy to Mrs. Chapman.

J. H. HAGY, *Chairman*

THE GEORGE WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

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(1)	Ocular Surgery, Pathology and Orthoptics	January 19-23, 1948
(2)	Ophthalmology	January 26-30, 1948
(3)	Surgery of the Extremities	February 2- 6, 1948
(4)	Abdominal Surgery	February 9-20, 1948
(5)	Psychiatry	February 16-27, 1948
(6)	Anesthesia	February 23-27, 1948
(7)	Neurology	March 1- 5, 1948
(8)	Thoracic Surgery and Endoscopy	March 1- 5, 1948
(9)	Thoracic Medicine	March 8-12, 1948
(10)	Gynecology	March 8-12, 1948
(11)	Infectious Diseases	March 15-19, 1948
(12)	Obstetrics	March 15-19, 1948
(13)	Metabolic Diseases	March 22-26, 1948
(14)	Newborn and Premature	March 22-26, 1948
(15)	Cardiovascular Diseases (including Electrocardiography)	March 29—April 9, 1948
(16)	Miscellaneous Topics: Recent Advances in Medicine	April 12-16, 1948

By appropriate combinations of the above, the following longer courses can be arranged:

Ophthalmology (courses #1, 2)	January 19-30, 1948
Surgery (courses #3, 4, 6, 8, 10)	February 2—March 12, 1948
Psychiatry and Neurology (courses #5, 7)	February 16—March 5, 1948
Internal Medicine (courses #7, 9, 11, 13, 15, 16)	March 1—April 16, 1948
Thoracic Diseases (courses #8, 9)	March 1-12, 1948
Obstetrics and Gynecology (courses #10, 12, 14)	March 8-26, 1948

(other combinations can also be arranged)

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Registration in each course is limited. Veterans can use their benefits under the G. I. Bill. Hotel accommodations are available. For further details write:

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Severe rickets still occurs — even in sunny climates

Vitamin D has become such an accepted practice in infant feeding that it is easy to think that rickets has been eradicated. However, even deforming rickets is still seen, as witness the above three contemporary cases from three different sections of the United States, two of them having well above the average annual sunshine hours for the country. In no case had any antirickctic been given during the first two years of life. *It is apparent that sunlight did not prevent rickets.* In other cases of rickets, cod liver oil was given inadequately (drop dosage) and even this was continued only during the winter months.

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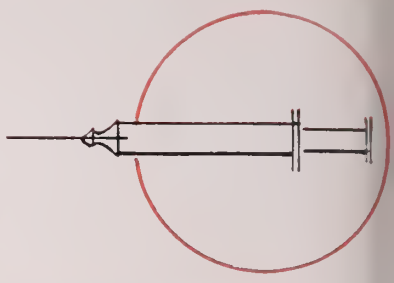
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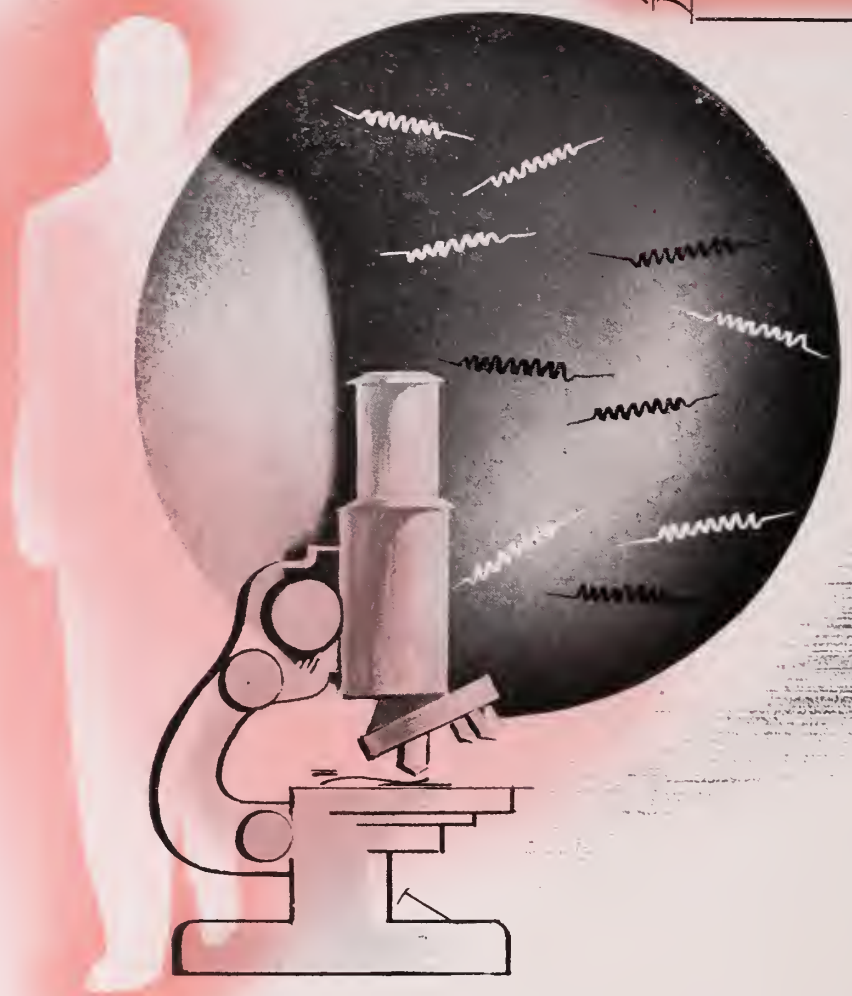
November, 1947

SYMBOLS OF SIGNIFICANCE

MAPHARSEN







Virginia Medical Monthly

Vol. 74, No. 11
WHOLE No. 1145

RICHMOND, VA., NOVEMBER, 1947

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A REPORT*

W. L. Powell, M.D.,
Roanoke, Virginia.

I feel deeply honored to be the presiding officer of the Medical Society of Virginia at this, the 100th meeting. This Medical Society was organized in 1821. The first president was Dr. James McClurg, of Richmond. Due to causes undetermined, there were several intervals of a few years each when no meetings were held. In 1870, following the War Between the States, the Society was re-organized and has held annual meetings since that year.

Following this brief address you will hear two distinguished men who will speak on the progress that medical science has made in Virginia and the United States in the past hundred years. For my part, I wish to report a few things that have interested the members of the Medical Society of Virginia during the past year.

President Truman has sent several messages to the Congress advocating compulsory medical care, financed by taxes and under strict Federal administration. There is strong evidence that these ideas were initiated and propelled by members of the Federal agencies. The Federal employees have established what they call "Health Workshops" in various locations. Allow me to quote from the last report of the Congressional Committee on Expenditures in the Executive Departments: "All the evidence before your committee indicates that these health workshops were planned, conducted, and largely financed with Federal funds, by a key group on the Government pay roll, who used the workshop method of discussion subtly to generate public sentiment in behalf of what certain witnesses and authors of propaganda refer to as socialized medicine. It is evident from the record that most of the planning was done by the Federal officials in Washington prior to each workshop conference and that each meeting was devoted to their own purposes—that of organizing pressure groups to agitate for compulsory health insurance, as then pending in Congress." In the concluding paragraph of their report they make this statement: "Suffice it at this time for your committee to report its firm conclusion, on the basis of the evidence at hand, that American communism holds this program as a cardinal point in its objectives; and that, in some instances, known Communists and fellow-travelers within the Federal agencies are at work diligently with Federal funds in furtherance of the Moscow party line in this regard."

Our political history shows that, whenever there are available large sums of government money, political influence and patronage thrive. Of course, compulsory medicine would necessitate the formation of other political bureaus. We all know how we have suffered in the recent past from bureaucracy. This would only add to our burden. The kind of medical care which the President advocates would involve the payment for medical services by a third party, which would disturb very seriously the patient-physician relationship. The patient is tempted to demand more attention than required and the temptation to some physicians to render unnecessary medical service would be great, as his income would depend upon the volume of his business. The fact that most physicians have as much as they can do at present, the added burden of rendering unnecessary care, and the making of reports in triplicate or quadruplicate to the Government agencies would make it humanly impossible to give the proper study to this increased volume of patients.

Socialized medicine originated in Germany about 1880 and was initiated in England a few years ago. This has resulted in marked deterioration of the quality and the quantity of medical care rendered. We all recognize the large part played in the maintenance of good health by proper housing,

*Address of the President, Medical Society of Virginia, before the annual meeting at Roanoke, October 13-15, 1947.

clothing, food and sanitation. None of this would be improved by any of the bills so far introduced in the Legislative bodies in the United States.

About 5% of the members of the medical profession do have a tendencey to charge exorbitant fees, and I feel that this has had something to do with initiating proposals for the introduction of compulsory medical care in this country. The medical profession as a whole is always willing to do what it can to relieve individuals of the expense of catastrophic illnesses, and it was with this idea in mind that prepaid hospital care in non-profit organizations was initiated. It is stated that at least 30 million have this care in the Blue Cross and it is variously estimated that an additional 15 to 20 million have taken out this protection through commercial companies. Within the last four years prepayment medical care has been introduced by the physicians. There are over sixty such plans in the United States operated on a non-profit basis at the present time. The membership of these organizations is over 6 million and increasing at the rate of over 200,000 a month, with over 140,000 in Virginia at present. This protection is also carried by many thousands in commercial companies. The fees that are paid for services rendered in these organizations, especially for surgical work, are possibly a little bit below the normal fees for the same type of work in a great many communities, but the condition equalizes itself, as the physician obtains fees from persons who would be unable to pay anything without this protection. And it is the duty of every physician to cooperate fully with these different plans, in order that we may combat, as far as possible, the urge for socialized medicine.

There has been considerable difficulty in persuading the rural population to take out this protection, but progress is being made with different groups of various farm organizations.

We hear a great deal about inadequate medical care and it is undoubtedly true that there are certain areas in the state of Virginia, as well as every other state, which do have inadequate care. This is chiefly in the rural areas, which are sparsely settled and under ordinary circumstances would not be able to support a physician.

The Hill-Burton Bill, which has recently been passed by our national Congress, provides a certain sum of money each year for the next five years to help overcome this deficiency. The Commissioner of Health has just completed a survey of Virginia in which certain areas have been designated as base hospital areas. They are Norfolk, Richmond, Charlottesville and Roanoke. Back of these are the smaller hospitals, which are called regional hospitals, and in the rural communities will be established what are known as health centers. The type of health center has not been definitely determined in Virginia, but it seems to me that a building could provide eight or ten beds for obstetrical and emergency cases and offices for the health officer of the community who would give preventive inoculations and look after the sanitation of his area. A laboratory and an x-ray technician should also be provided whose reports would be transmitted to the physician in charge, to assist him in making a proper diagnosis. Having these facilities would encourage younger men to go into rural communities to carry on the work of their profession. Good roads would also increase the area which could be served by these health centers. Illnesses which can not be handled by the health centers would be transferred to a regional hospital, and if proper treatment could not be rendered in these institutions they would be sent on to a base hospital area.

This Hill-Burton Bill provides in Virginia, in the form of State aid, the sum of over $2,000,000 a year for the five-year period. The locations for additional beds and health centers recommended by the office of the Commissioner of Health as a result of the surveys would have to be confirmed by the Surgeon General's office of the Public Health Service before construction could be initiated. This bill also provides that two-thirds of the cost of construction is to be borne by the community and one-third would come from Federal funds, provided that it is shown that the special community in which these health centers are located can support them. In certain rural communities which can not raise two-thirds of the money required for this construction it is undoubtedly the duty of the State to provide their proportion. I want it thoroughly understood that after the location has been approved there will be absolutely no Federal control.

The great difficulty would be in staffing these hospitals. The first requirement is a well-qualified general practitioner, who is often spoken of as the "forgotten man". A great tendency in our present

age is specialization. In a recent survey made in Virginia our central office in Richmond sent out 1,921 postal cards to obtain information as to how many specialists and how many general practitioners we have in the state. 66.4% of these cards were returned, with the result that they showed 43.3% general practitioners, with an average age of 52, and 56.7% specialists. When you consider the fact that a well qualified general practitioner can look after 85% of the patients seen and will call in the proper specialist for assistance and advice concerning the other 15% it leads you to believe that, if the present tendency continues, a great many of the specialists will revert to general practice in order to make both ends meet. Probably the cause of this tendency to specialize may have a financial basis. A great many men who are returning from the Services have seen the increased rank given to specialists. I feel that the teaching institutions have a great deal to do with this tendency among the students. They are lectured to by specialists in each line. On graduation and application for internship in most of the larger hospitals they must designate whether they will be in medicine or surgery. At their age they are incapable of choosing and they stay through the first year in the course designated. It is stated that they are advised to take an additional year on the other services, but very few of them do. Would it not be better for the physician and the ultimate patient if they were given at least two years of rotating internship? They would then be in a better position to determine which specialty they are particularly fitted for and, if they do not specialize, they would be better qualified for the general practice of medicine. Those who elect to go into general practice should be encouraged to keep up with the advances made in medical science. I feel that it is the duty of the Medical Society of Virginia to hold post-graduate courses in the teaching hospitals and to send out teams to the rural communities to instruct those unable to attend the regular courses. This is being done, to some extent, by The Department of Clinical and Medical Education of this Society in the early diagnosis of cancer. A great many of our larger hospitals have only specialists on their staff. There are a few more progressive hospitals at present which are putting a general practice section on their staff. I am glad to see that the American Medical Association has designated a general practice section, and I am also glad to know that the members of the Medical Society of Virginia are attempting to form such a division.

The increased demand for nurses by the Army and Navy, the Public Health Service, industry and other branches has resulted in a serious condition as to the supply of nurses. The increased educational requirements for entrance in training schools and the amount of time spent in didactic teaching has brought about a change in the method of nursing, which I do not believe is beneficial to the patient, either from a financial or nursing point of view. There are at present three hospitals in Virginia which have initiated a training school for practical nurses, giving a course of one year in all the essentials for bed-side nursing. At the end of this period, by taking the examination, they become registered practical nurses. These should be qualified to perform most of the duties required in bedside nursing care in the home or hospital.

The Medical Society of Virginia at its last session confirmed the action of the Council in establishing a Department of Public Relations, which has been doing splendid work. The development and maintenance of good will is the fundamental objective of the profession in public relations. Physicians are individualists who do not as a rule spend much time telling the public how good they are or how much good they do. We have a competent Director of Public Relations who will tell the public but whose chief job at present is to educate the profession along these lines. We have asked every component society to appoint a Public Relations Committee who will have charge of this phase of the work in their particular community. This has been done in most local societies. The next thing necessary is a little needling to make them function. The radio and press have been used in educating the profession and the public as to what the profession is doing, and efforts have been made to impress upon the public the importance of protecting themselves against catastrophic illnesses by participation in the prepayment hospital and medical care plans.

The medical profession is the only profession which exerts so much effort in every way to put themselves out of business. In comparatively recent years by research they have found that proper

sanitary regulations lessen the amount of sickness. They have developed preventive inoculations against certain diseases and are constantly working to develop others. They have found that some diseases can be modified or cured by antitoxins. It has been their constant desire to protect citizens as far as possible.

They also want to protect the population against the practice of members of certain cults who do not believe in preventive inoculations, antitoxins, insulin for diabetes, or any of the recognized measures used for the prevention and the alleviation of certain conditions. The sole belief of these cultists is that all pathological conditions are due to some malalignment of the vertebrae. In opposing these practices the sole object of the medical profession is to protect the public. We see too many patients who have spent too much time being "adjusted", and, when they come under the care of a physician, are found to have cancer, tuberculosis, or one of the many other conditions which, if taken early, could have been benefited or cured.

A law passed in 1944 required these practitioners to take an examination on basic sciences and make a passing grade of only 50%. Certainly, any one who pretends to diagnose or treat the sick should have the elementary knowledge which these subjects include. According to this law they have been given five years in which to prepare themselves for this basic examination. So far none has applied. Of course, if the majority of the population and the representatives in the State Legislature want these people without proper education to diagnose and treat their diseases, the medical profession, who see so many distressing results, will say nothing more. I would like to repeat—we only wish to protect the public. The Legislative Committee and our attorney have gotten out a pamphlet giving the history of the cultists. If the Legislators would read these true facts and act conscientiously the public would be protected.

We now come to the consideration of that class of chronically ill who are unable to pay for any medical care. They are the responsibility of their communities and the state, and up to the present have been provided for very inadequately. I am glad to see that we are making some progress for their better care. I believe that the Council on Health and Medical Care is greatly responsible for calling the attention of the Legislature and the Executive to the conditions as they exist. The Legislature in 1946 passed a law, referred to as the State and Local Hospitalization Program for Indigents, amended at the Special Session in 1947, which "made available the sum of $600,000 each year of the current biennium to be used on a matching basis by the counties and cities of the Commonwealth for the hospitalization of indigent and medically indigent persons residing within the State boundaries. $300,000 is in the form of established credit in the amount of $150,000 at each of the hospital divisions of the University of Virginia and the Medical College of Virginia. . . . . The eligibility of individuals for hospitalization under this program is determined solely by the locality". The law specifically states, however that "this program is not limited to those individuals who are eligible for public relief but also the program includes the group often referred to as medical indigents." The Governor has allocated a special fund for increasing the physical plants and the personnel in the state institutions to enable them to give these poor unfortunates proper care and treatment. The medical profession has always devoted much time to the care of the indigent and will always be glad to do this.

I hope you have gathered from this report:

1. That the members of the Medical Society of Virginia are opposed to compulsory bureaucratic medical care, as it has been proven in other countries to result in deterioration in the quality and the quantity of medical care;

2. That we feel that voluntary prepayment hospital and medical care is far superior to any form of compulsion;

3. That it is our sole aim to protect the public from any form of practice which is not founded on scientific facts;

4. That any funds contributed by the Federal Government for the care of the sick should be in the form of State aid and be controlled by the proper department of the State Government.

SURGICAL MANAGEMENT OF UNILATERAL HARELIP*

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In frequency, no other congenital abnormality occurs more universally than that of the cleft lip. No race is exempt and some writers have placed its presence as one in every two thousand births. Because of its common occurrence in the past, almost every physician doing surgery has tried his hand at closing the deformity. I say "closing" because it was for the most part their only aim, and the patient was left with much to be desired as to satisfactory cosmetic and physiological results. In this communique, I will present some of the advances made in recent years by investigators in this field.

The repair of unilateral harelips has developed from that of obtaining a simple union of the cleft to a scientific reconstruction which affects not only the closure but also produces a satisfactory function and a good cosmetic result.

The first operation performed on the harelip dates back to 42 B.C. At that time methods were devised to obtain closure of the lip by denuding the edges of the cleft and suturing them together. Almost no concept of future development entered into the operative plan, with the result that postoperative deformities occurred frequently and the stigma of the affliction was borne by the patient for the remainder of his life. Whereas satisfactory function can be obtained by this crude method, it leaves much to be desired in the way of cosmetic perfection.

Such men as LaMonier in 1794, Grabe in 1817, John Warren in 1820, and VonLangenbeck in 1861 devised various types of procedures with the object of obtaining a more perfect closure. They proved, by their varied technics, the unsatisfactory results that were then obtained generally. Very few of these methods took into consideration the differences in anatomical relationships of the deformed side with that of the normal lip. It remained for Mirault in the latter part of the 19th century to approach this problem with any degree of scientific investigation or consideration. His technic did much to overcome the postoperative deformity of shortening of the lip and the malformation of the involved nostril. This operation, which was modified to some extent by Blair in the early part of the 20th century, is today the best procedure.

The etiology of harelips, in spite of the widespread investigation during the last twenty to thirty years, still remains shrouded in considerable uncertainty. Various theories have been advanced, such as the formation of adhesive bands within the facial clefts about the sixth week of fetal life at which time these clefts ordinarily close, maternal impressions, damage of the ova, and heredity. All theories have been sustained with some degree of proof; however, as we look at the problem today, heredity probably has the most impressive support. In reviewing data collected by various investigators as to the role it plays in this deformity, one cannot help but be impressed by the fact that in most instances a definite history can be obtained where members of the child's ancestry have had either a cleft of the lip or of the palate or both. Approximately twenty-five per cent fall into this group. This percentage would probably be larger if more families were certain of their background. In spite of the evidence brought forward by these statistics, there are certain other interesting features occurring in the incidence of these cases that cannot be ignored. The majority of children with harelip deformities are born to parents in their early twenties and it usually occurs in the first male offspring. The intermarriage of closely related families seems to increase its frequency. If such defects occur in one child, there is only a ten per cent chance that other children of the same marriage will have a harelip, unless either the mother or the father has a cleft lip or palate. The incidence and type of this deformity have been studied with the results we find that males are afflicted in 52.6%, females 47.4%, unilateral cleft of the right side of the lip 40%, and unilateral cleft of the left 60%. Statistics show that 16.5% of harelip cases also have an enlarged thymus gland, while 19.8% of these cases have other associated congenital abnormalities.

It is imperative in the repair of these cases that the anatomy involved is taken into minute consid-

*Presented before the Southside and Fourth District Medical Association, Petersburg, Virginia, December 10, 1946.

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eration. The normal upper lip consists of definite contour with which we are familiar. This is supported by the orbicularis oris which surrounds the entire mouth and consists of many interlacing bundles of muscle. This muscle, also is closely associated with fibers of the triangularis, the canius, the risorius, the zygomaticus and the buccinator. Because of this association, when the muscle is divided, as it is in single harelip, the lateral half is pulled upward and outward by the buccinator muscle. The medial portion, having less support, is usually under developed and is retracted toward the columella. Section through the divided portion of the orbicularis oris reveals an absence of the horizontal fasciculi in the area of the cleft. This may result in an abnormal contraction even in the most perfect closure. The amount of mucous membrane forming the under surface of the lip and the vermilion border is always decreased. This is due primarily to under development of the overlying structures. The above facts bring to attention the necessity of obtaining as much lip area in the region of the cleft as is possible for a satisfactory length, thickness and width of the portion to be closed. Needless to say, none of the available material should be sacrificed unnecessarily.

In order to obtain the highest degree of operability, preoperative preparation of these individuals should be carried out with the utmost thoroughness. Harelips have been repaired from the age of two hours up until adult life. A lot of discussion has been given to the most opportune time for reconstruction. Today, whereas some surgeons prefer the first week, the majority think it wisest to wait until the child is at least six to eight weeks of age. By this time, it is usually accustomed to being artificially fed, is able to take nourishment reasonably well, and has shown either satisfactory or unsatisfactory progress in growth and development, and other congenital defects, if present, should be in evidence at this age. No other operation should be undertaken at the time the lip is repaired, as this is a major procedure and one should not jeopardize the outcome in his eagerness to repair other deformities. These patients should be admitted to the hospital for at least forty-eight to seventy-two hours prior to operation. This allows the child to become acclimated to hospital routine and to afford the attending surgeon an opportunity to make two or more complete physical examinations. A thorough history is taken, including the presence or absence of congenital deformities in the immediate family, the health of both the mother and father and contact of the baby with contagious diseases, particularly tuberculosis. Laboratory studies including blood and urine examinations are made as well as x-rays to determine the presence or absence of chest pathology, and particularly enlargement of the thymus gland. If the hemoglobin is below 75%, a transfusion is given before operation and, if it is over 75%, provisions for donors are made in case they are needed following the repair. The clotting and coagulation times are determined and, unless these tests are normal, the operation is postponed. In cases giving a history of jaundice following birth, the administration of vitamin K is indicated. When the child is accepting the milk formula satisfactorily, the administration of calcium is not necessary. It is essential that the urinary output be estimated and if there is some question as to kidney function, the operation is delayed until the possibility of congenital deformities in these organs has been ruled out. All temperatures are obtained rectally every four hours and when there is an elevation above 99, the cause of this fever is eliminated before operation. The ears, nose and mouth are examined daily since the majority of these patients carry residual infections particularly in the nasal cavities. If discharge from the nose is more than normal, smears are taken to determine the nature of bacterial activity. In the past, preoperatively, nose drops of ephedrine, neosynephrine or 5% sulfathiazole suspension have been used. These have been recently discontinued because in occasional cases they have caused vomiting on administration and the therapeutic efficacy is questionable unless actual infection is found. The examination of the heart and lungs is of the utmost importance and daily checks for pathology in these organs is advisable. Much can be gained by watching the general behavior of these patients. Frequently, general examinations do not show muscular weakness, presence of convulsive seizures, or lethargic states. Needless to say, operative repair of patients showing any of the latter conditions, would be untimely.

Following the determination of the patient's operability, the surgeon proceeds with the plan of operation. To simplify this matter, it is better to consider

the three types of deformity that occur in single harelips. The simplest is a cleft of the vermilion edge of the lip extending up for a distance of usually one-half to one cm. toward the nostril floor. This is stage one. In stage two, there is an extension of the cleft up to and including the nostril floor but is not associated with a cleft of the alveolar ridge. In stage three, we find a complete cleft of the entire lip and nostril floor associated with a deformity of the alveolar ridge and palate. The nose, the vermilion edge and the lip are considered separately in outlining the procedure.

In stage one, the nose is usually normal or only slightly flared (Fig. I a and b; Fig. II a and b).

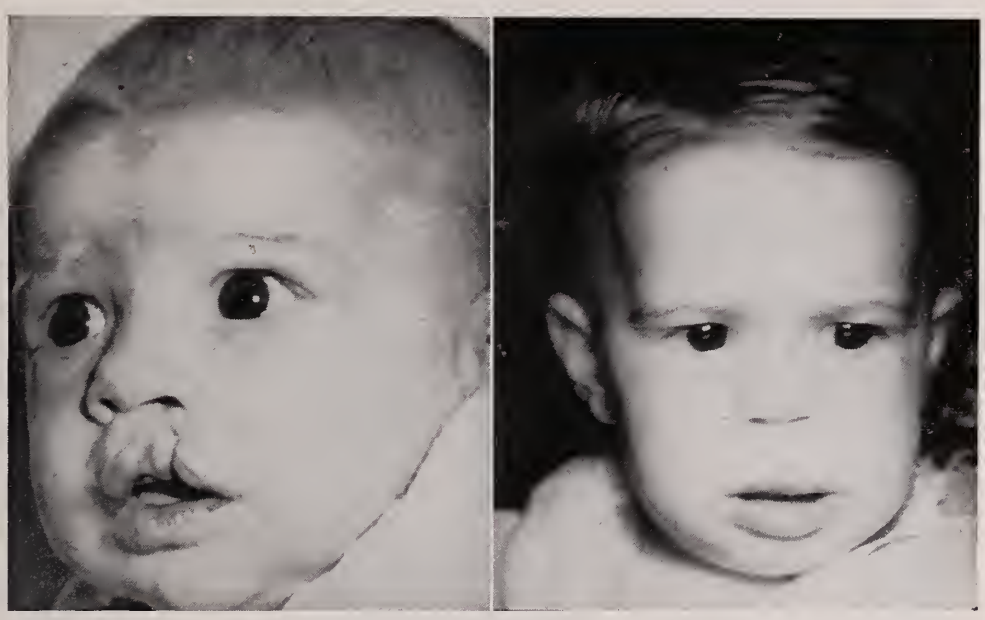


Fig. I—(a) Stage one harelip showing underdevelopment of both edges of the cleft. (b) Results obtained following repair by the Modified Blair Mirault technic.



Fig. II—(a) Stage one harelip with flaring of the nostril on the involved side. (b) Postoperative results obtained following procedure described in the text. The deformed nostril was made equal to that of the normal side because no future widening is anticipated.

Here it is best to complete the cleft into the floor of the nostril and to measure accurately the width of the normal side so that at this first operation the affected side can be constructed accordingly. Consideration of the height of the nostril is not a serious problem in these cases, as the future growth of the lower lateral cartilage will usually equalize the two nostrils.

In stage two, as in stage one, there is enough tissue to construct a normal floor which can be expected to remain fixed as development takes place (Fig. III a and b). However, we have another problem of a wider rotated ala with flattening of the lower lateral cartilage which can be corrected by making incisions within the nostril at the upper and lower edges of the cartilage and dissecting it free. Following this, the entire lateral portion can be removed from the nose and the angle of required height can be determined. This is then sutured to the angle of the normal side of the nose. The above procedure not only establishes height but does away with the buckling of the cartilage in the center of the nostril edge.



Fig. III—(a) Stage two harelip with excessive widening of the nostril in a child eight years of age. (b) The repair shows equal nostrils and normal lip thickness and length.

In stage three, there are two additional problems, rotation of the ala and lack of tissue for an adequate nostril floor (Fig. IV a and b and Fig. V a and b). The latter is further complicated by the fact that there is no foundation for the floor to rest upon. Future growth will destroy the most perfectly constructed nostril and, therefore, unsightly allowances may have to be made to take care of later development. For relaxation, the tissue of both cheeks is extensively undermined. The floor of the nostril is made from a full thickness lip flap taken from the upper lateral side of the cleft. This is anchored to the septum and when the ala edge is sutured to it, the width of the nostril should be the same size or smaller than that of the normal side. Care is taken to allow for internal rotation of the ala. This must also be raised slightly to make allowances for the future downward pull of the lip scar and dental development. The lower lateral cartilage can be readjusted as in stage two.

The construction of the lip is now considered. This includes the thickness, length and fullness of the lower one-third.

In the first stage, the cleft is usually narrow and the two sides are about equally developed. Muscle development is good and so thickness is not a real problem. In the majority of cases, simple excision of the vermilion edge of the cleft and correct approximation of the wound produce a satisfactory result.

In the second stage, measurements of the normal side are taken first. The width of the floor of the nostril is measured between the lateral edge of the

columella and the inner lower border of the ala. The distance from the columella to the vermilion edge and from the ala to the vermilion edge are ascertained. The corresponding points are determined on the defective side. This determines the length of the lip and width of the nostril floor. It will be noted that if the thinned out edges of the cleft are sacrificed, the thickness of the lip will be sufficient as the line unavoidably passes through normal muscle development. The fullness of the



Fig. IV—(a) Stage three harelip with rotation of the medial side of the alveolar process into the floor of the nostril and deviation of the columellar to the normal side. (b) The normal size of the nostril, as shown above, was obtained by dividing the septum at the base and shifting it to the midline. The line of incision was carried through the normal lip tissue in order to secure adequate length and thickness of the entire lip.



Fig. V—(a) Stage three harelip with rotation of the alveolar process into the floor of the right nostril and underdevelopment of the lip on both sides of the cleft in a boy ten years of age. (b) A satisfactory repair was secured after shifting the columellar to the midline and forming the floor of the nostril with a pedicle flap taken from the upper medial portion of the cleft.

lower border is obtained by measuring the perpendicular distances from the first line on the lateral side to the fullest vermilion edge of the cleft on that side. The lower triangle so formed, assures an increase in fullness by one-eighth to one-fourth inch in this area. It is wise to allow a little increase in length on the affected side when the patient is young and when the lower part of the cleft is excessively wide.

In the third stage, in addition to problems presented in stage two, a flap for the floor of the nostril is outlined. This is done by turning inward one-fourth to one-half cm. of the upper lateral edge of the skin, the inner edge of which is medial to the line drawn from the ala to the vermilion border. The width of this must be included in the nostril floor measurements.

Plans for vermilion border should include thickness, accurate approximation of skin, vermilion line edge, and minimization of scar contraction which may produce puckering.

In all stages the problems are the same. If the lip measurements are taken to match the normal side, thickness is not a real problem. Skill in matching vermilion skin edge alignment is the only prerequisite to this solution. Reduction of excessive scar contraction is best carried out by notching the vermilion border in the tongue and groove fashion. This not only breaks up a continuous suture line, but gives a more rounded appearance to the lip.

Pre-operatively, the patient is allowed nothing by mouth for six to eight hours. No hypnotic drugs are administered to infants; however, in older patients morphine is given. The infants receive 1/750 grain of atropine and the older children larger doses. The lower bowel is emptied eight hours before the patient is taken to the operating room.

At operation, the arms are tied down and the skin is cleaned with 70% solution of alcohol, all crusts are removed from both nostrils, and the head is draped in sterile towels. The anesthetic of choice is open ether spray and should never be sufficient in amount to produce complete relaxation. It is better to have the child slightly tense and not to destroy the gag reflex too completely. If deeper anesthetic is administered, there is always danger that laryngeal spasm or aspiration of material into the trachea may occur. Continued suction of the oral cavity with a catheter or metal tube is used throughout the entire operative procedure. Measurements of the normal side are taken and fixed on the affected side by small puncture wounds in the skin with sterile calipers. The first step is to undermine thoroughly the entire lip, cheek, the lateral portion of the nose up to the infra-orbital region and as far laterally as is necessary to gain complete relaxation of the lateral half of the face. Care is taken to preserve the infra-orbital vessels and nerves, as cutting these does not increase relaxation and may establish numbness and deficient blood supply in this area. The medial side is undermined as far as one centimeter to one and one-half centimeters beyond the normal ala. The descending portions of the lower lateral cartilages in their apposition with the tissues at the base of the columella are preserved. Occasionally, if there is a wide deviation of the columella, it may be necessary to make a submucous incision at the base of the septum in order to shift this structure to the midline. All bleeding is controlled with fine hemostats and packing. The lip incisions are made between previously measured points on each side and include the skin, muscles, and mucous membrane. These are carried to the vermilion border on both sides of the cleft, but they do not include it, as it is impossible to determine the required amount that is to be needed at this stage. The skin over the lower lateral cartilage on the affected side is elevated with a pair of small scissors so that the cartilage can be easily rotated into its new position without buckling. In some instances, it is necessary to dissect the entire lateral half of the cartilage free in order to raise the angle to that of the normal side. The floor of the nostril is formed by suturing the muscles of the lateral half of the lip to the connective tissue at the base of the columella with an inverted 000 chromic catgut suture. It is very important to place this accurately, as it forms the foundation of the nostril which should be at the same level and circumference as that of the normal side. This brings the ala on the affected side upward and inward. The suturing of the muscles and mucous membrane is further continued from above downward, using an inverted on-end mattress suture of the same material. This is discontinued at the vermilion border of the lip and these sutures are tied loosely so no ischemia is produced along the wound edges. With each suture, the position of the nostril is ascertained

to determine whether the resulting tension is causing any displacement. The skin sutures of C silk are placed within the floor of the nostril and continued downward until the vermilion border of the lip is reached. These are tied snugly and they are placed sufficiently close together to give the correct approximation of the skin edges. Next, the amount of the vermilion edge is determined by notching the lateral portion of the lip and making a tongue of mucous membrane and muscles from the medial side. This is sutured in place with silk or chromic catgut. In this area frequently the deficiency of lip available will cause a thinning of the edge with resulting puckering deformity in later life. If the necessary thickness cannot be obtained, an extension of the previously marked skin lines is carried out along the vermilion cutaneous border until the required amount of tissue is secured. The upper border of the mucous membrane under the lip is sutured loosely to the mucous membrane of the alveolar ridge. When this is not closed, it will frequently lead to a flattening of the upper lip because of adhesions. A prolapse of the ala cartilage into the nostril can be sutured in its normal position with sutures passing through the skin at the ala down to and including the lateral portion of the lower cartilage so as to assure correct healing. No tension sutures are necessary, if correct approximation and relaxation have been obtained. The wound is painted with compound tincture of benzoin and tension of the upper lip is reduced by the application of a Logan lip clamp.

There are several postoperative deformities that may be prevented at the time of operation. The most common of these is a flat, tight lip on the affected side, usually a result of sacrificing too much tissue along the edge of the cleft or allowing the mucous membrane of the lip to heal above its normal position with the mucous membrane of the alveolar ridge. This can be prevented by meticulous care in the utilization of the tissue on the sides of the cleft and also by the correct suturing of the undersurface of the lip to the mucous membrane of the alveolar ridge. If necessary, perpendicular incisions in the mucous membrane of the lip of the upper edge can be made for relaxation. A notching deformity of the lip is generally caused by the utilization of the vermilion edge of the cleft which is not as thick as that of the normal side. Satisfactory results cannot be obtained by using an underdeveloped cleft border in the repair of a lip. If necessary, as has been stated before, extension of the incisions along the vermilion cutaneous junction can be carried out until a normal thickness is obtained. Occasionally, there is an error in leaving too much mucous membrane at the edge of the lip with the result of hypertrophy of tissue in this area. Correct estimation of the amount of tissue needed will alleviate this.

Deformities of the nostril are more difficult to prevent. These include prolapse of the lower lateral cartilage into the nostril, widening of the nostril floor, insufficient formation of the nostril floor, and deviation of the columella to the normal side. By freeing the entire lower lateral cartilage and suturing it into its correct position, particularly at its angle, the buckling deformity can be avoided. Excessive width of the floor is caused usually by incorrect suturing or lack of tissue used in its formation. When there is a question of excessive narrowing of the base of the nostril, a pedicle flap already outlined must be used. The deformity caused by the deviation of the columella to the normal side is easily corrected by shifting it to a median location by procedures described above.

The formation of a "Cupid's bow" can be made by increasing the triangular area of skin left at the vermilion edge on the lateral side. If the vermilion edge on this side is extremely thin, such results are not always possible, because it must be sacrificed in order to obtain more thickness. When the plan of operation is decided upon, the operator takes into consideration the amount of scar tissue contraction that may occur, making allowance in the length of the lip, particularly in young infants. The question arises as to the advisability of removing teeth protruding into the cleft in older children. In my opinion these teeth should be removed, because they are of no value and will, in some instances, cause irritation to the under-surface of the wound.

Following operative repair, infants are given intraperitoneally 10 c.c. of normal saline per pound of body weight. The older children are given 500 to 1000 c.c. of saline by hypodermoclysis. A good measure of satisfactory results depends upon the postoperative care of these individuals. They are placed in a warm room with constant nursing attention for at least eight hours in order to prevent

aspiration of mucus into the bronchi, to watch for symptoms of shock, and to remove the excessive amount of mucus that may accumulate over the wound surface. The hands are restrained. Feeding is begun six hours after operation. The infants are given three ounces of one per cent Karo water for approximately three feedings, at which time they are returned to their regular schedule. The older patients are allowed a full liquid diet six to eight hours following repair. The administration of postoperative sedatives is important, as an undue amount of crying causes trauma and increases swelling in the wound area. The infants receive ten to fifteen drops of paregoric every four hours, and the older children are given codeine in correct doses. Usually the temperature will rise for the first twenty-four to forty-eight hours to around 100 or 101 degrees. If this persists, an enema of one per cent Karo and one per cent salt (three to four ounces) is ordered for infants every six hours and in older children aspirin in the appropriate dose is administered. The application of an ice cap is beneficial in reducing excessively high temperature, but it should not be used continuously over a long period of time. If there is evidence of infection within the nose, throat or lungs, penicillin is started at once.

Care of the suture line of the lip is of the utmost importance. Though it is not advisable to be too zealous in cleansing this area, excessive formation of clots or scabs of secretion are removed and the lip repainted with benzoin as a protective measure daily. All sutures are removed from the lip at the end of seventy-two hours in order to prevent suture scars. If there is little swelling and reaction along the lip edge, most of the sutures may be taken out in thirty-six to forty-eight hours. It is unwise to apply ointments or powders to the suture line, as they afford little protection and obscure the process of wound healing. If infection does occur, hot wet sponges of saline are applied. The latter complication, fortunately, is extremely rare. The infants are fed with an eye dropper or an asepto syringe to prevent excessive motion of the lip, while older children use a cup or glass. Nursing from a bottle is never permitted. The Logan lip clamp may be removed at the end of seven days, but if swelling has been excessive, it should remain in place for a longer period of time. The patient usually is able to leave the hospital in seven days. Instructions are given the parents to keep the child's hands and other objects out of its mouth for a period of another two weeks. At the end of four weeks, light massage of the scar with cocoa butter or olive oil will aid in preventing excessive contraction.

In conclusion, a general resume of the development of operative repair of the cleft lip has been presented with a detailed discussion of the present day management. The preventive management of postoperative deformities has been outlined.

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Floral Eponym (56)

RUDBECKIA

RUDBECK, OLAF, 1630-1702, AND RUDBECK, OLAF, JR., 1660-1740

The two Rudbecks, father and son, were professors in Sweden. The father, when a student at the University of Padua, discovered on January 27, 1651, the lymphatic vessels of the intestine, distinguishing them from the lacteals.

Rudbeckia is a genus of asteraceous herbs, the coneflowers. The 30 species are exclusively North American. R. laciniata, the thimble weed, is a diuretic and tonic. R. hirta is used for a homeopathic preparation.

SIMPLE ADENOMA OF THE BREAST

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Simple adenoma of the breast or adenoma simplex occurs very infrequently, though it has been described by several authors. Ewing[1] made mention of it in his text, "Neoplastic Diseases". Ziegler[3] describes tubular and acinus varieties. As described in the literature, most of these tumors show a considerable growth of connective tissue. It is stated by some writers that the proliferation of connective tissue approximates that seen in fibroadenoma with which they are connected by transitional forms. The gross appearance and course are very similar to those of fibroadenoma.

de Cholnoky,[2] in 1939, from the Tumor Clinic of the New York Post-Graduate Medical School and Hospital found 40 pure adenomas in 863 female breasts, or an incidence of 5.5% in their series. Against this he found 174 cases of fibroadenoma, or an incidence of 29.5%. The other tumors in the series were cystic, connective tissue tumors, accessory breast, etc. In his series of 1291 cases there were 781 (51%) which were benign and 510 (39%) malignant. Simple adenoma is claimed by de Cholnoky[2] as occupying 1.6% of all cases of mammary disease. He accepts it as a distinct entity in contradiction to Geschicter.[4] The tumor is described by the author as being well defined, freely movable, moderately firm and rather elastic. He states that microscopic examination alone will make the diagnosis certain. Some of the benign lesions de Cholnoky[2] considers in the differential diagnosis are acute inflammatory processes, chronic inflammatory processes, chronic cystic mastitis, neoplastic disease of the breast such as lipoma, hemangioma, lymphangioma, myoma, neurofibroma, cystadenoma, fibroma, papilloma, fibroadenoma and malignant growths.

Foot,[5] in his Classification of Mammary Tumors, states that simple or granular adenoma often resembles accessory mammary tissue because of its being so well differentiated. His further statement that tumors of this type vary from small globular ones characterized by branching ducts that taper to bulbous acini to larger growths that take on a more complex appearance, the canaliculi becoming thick walled with more primitive cells and a lesion definitely canalicular in origin. The latter lesion shows many cystic dilatations and in some instances produces very bizarre structures. Both types are well encapsulated and non-malignant. He differentiates this type of tumor from the fetal adenoma described by Ewing,[1] the latter being composed of innumerable canaliculi showing a non-acinous structure and having a loose reticular stroma. In the latter the lining of the tubules show a low cuboidal epithelium resembling that of the fetal mammary gland. These fetal adenomata show active proliferation of both the epithelial and the connective tissue elements, with many mitotic figures present. They are not clinically cancerous.

Lewis,[6] in his Practice of Surgery, states that occasionally the pericanalicular type of fibroadenoma lesion contains such a preponderance of glandular structure as to warrant the term adenoma. These, he states, are relatively small and are more uniform in size than the intracanalicular tumors.

Moore[7] in his text-book accepts adenoma (simplex) as a definite entity. His description states that they arise from the large ducts and consist of either solid masses or large indefinite cells or a network of duct-like or acinar spaces. He further states that cysts may develop from the inspissated secretion that may accumulate within the spaces.

Eva Haumeder[8] reported a case of degenerating adenoma of right breast in a patient having a fibroma of the ovary. The growth was represented by a soft hemorrhagic, nodular tumor measuring 4.5 by 3.5 by 3 cm. in size. It was cystic, rather gelatinous, and encapsulated. The microscopic picture presented within a mucinous degenerated stroma a few glands, many of which were dilated to form cysts; the lining was composed of epithelial cells.

Haggard and Douglass,[9] in 1923, reported a series of 255 breast tumors. In this group they found 9 simple adenomata and 28 fibroadenomata and 10 fibromata.

Only the following ten cases of simple adenoma of the breast were encountered in 103,685 admissions in an obstetrical and gynecological hospital during

the period from January, 1927, to October, 1945.

The case most recently encountered was that of A. T., No. 70128, age 34, married, colored. Admitted 10-9-45 with a history of having had nine pregnancies, eight of which were full term, the second being an abortion of three months. Aside from childhood diseases there had been a goiter operation in 1932. Menstrual history was normal. Two months prior to admission she noticed a tumor mass in the medial portion of the left breast at 10 o'clock on the clock dial. It had not been painful but had enlarged progressively. At the time of examination her last menstrual period and period of amenorrhea corresponded with an enlarged uterus diagnosed as six month pregnant. Examination disclosed a well circumscribed, rounded, non-tender, firm tumor mass in the upper medial portion of the left breast measuring 7 cm. in diameter. It was not attached

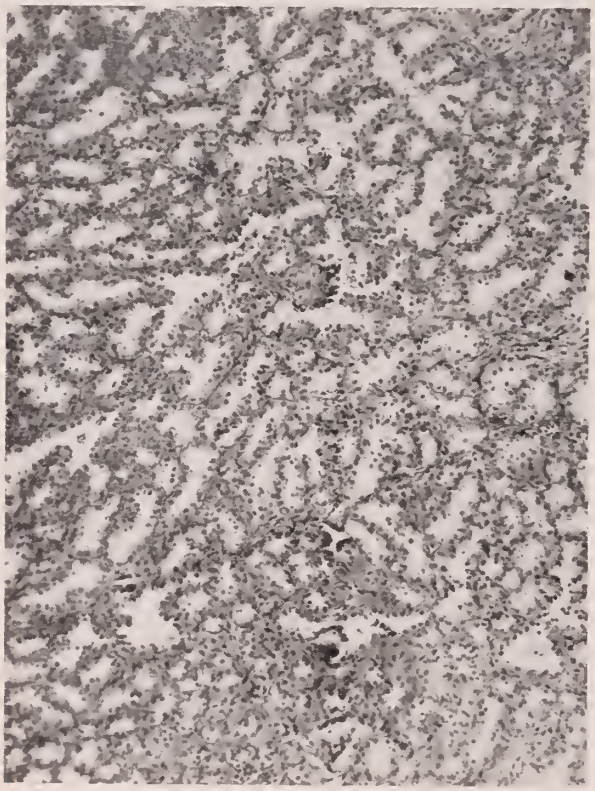


Figure 1. Section showing uniform acinar arrangement (simple adenoma) from first case, Mrs. A. T.

to the overlying skin and was movable. Laboratory tests including serology were negative. On examination the tumor was circumscribed and encapsulated; it was irregularly lobulated. It had the feel of soft rubber and on section the surface was moist and tan. On microscopic section it was composed of acinar tissue with a few distended thin-walled ducts at irregular intervals through the acini. At times lymphocytes were scattered through the stroma. Pathologic diagnosis: Simple adenoma of breast.

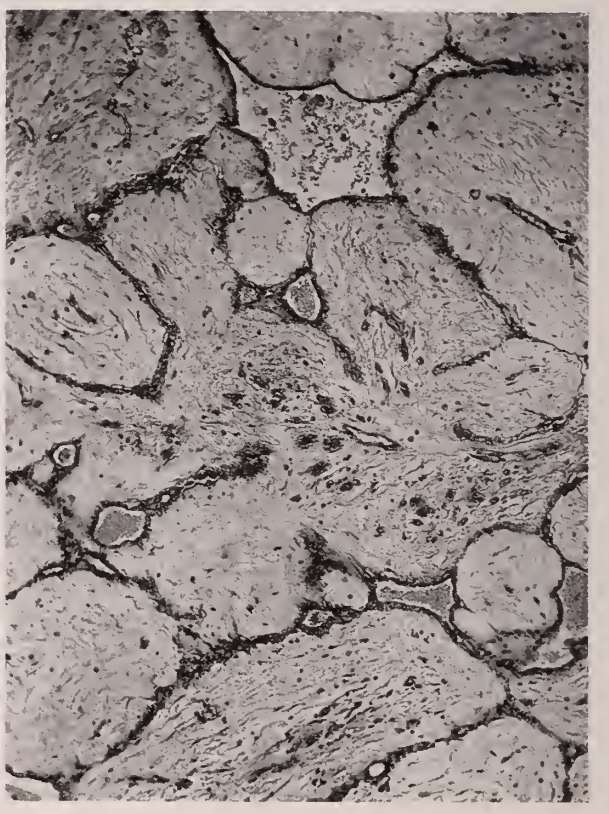


Figure 2. Section showing intra-canalicular fibro-adenoma—to contrast with Figure 1.

Resumes of other cases encountered:—

C. S., No. 635, age 19, white, single. Admitted 2-3-27 with a history of a small mass in the right breast noticed for a period of 3-4 months. Serology and laboratory work were negative. The mass was removed and found to consist of a small spherical tumor 2 cm. in diameter surrounded by a white fibrous capsule. The tumor itself was soft and meaty. Section was made up of gland-like tissue. At one side the structure was that of mammary gland, but in the center the cells were more heaped up and the epithelium lining the gland spaces was much thicker. The fibrous tissue stroma was sparse. Pathologic diagnosis: Adenoma of breast.

T. S., No. 830, age not stated, married, white. Patient admitted 5-15-29 because of a tumor mass in the left breast and a diagnosis of chronic appendicitis. Serology and other laboratory work nega-

tive. The mass in the left breast measured 4 cm. in diameter and seemed definitely encapsulated by connective tissue and some breast tissue. It was firm, irregularly lobulated and slightly yellow in color. Numerous irregular cysts were present throughout. Microscopic section showed an extreme increase in the number of acini, otherwise relatively normal in themselves. The mild hyperplasia of the acini resembled much that seen in the acini of a lactating breast. The stroma was of young connective tissue type, seemingly rapidly growing and infiltrated with lymphocytes. A number of large spaces traversed the tumor irregularly. These were lined by low epithelium which often proliferated into papillary projections. Pathologic diagnosis: Simple adenoma of breast.

E. M., No. 1014, age 30, married, white. Admitted 11-5-33 with complaint of vaginal discharge and mass in the right breast. Mass in the right breast had been noticed for a period of 3-4 years and had shown some progressive enlargement with tenderness during her menstrual periods. Serology and laboratory data were negative. The mass in the right breast consisted of a firm, encapsulated, lobulated, irregular shaped tumor, the cut surface of which had a peculiar "meaty" appearance. Microscopic section showed a dense fibrous and collagenous connective tissue stroma in which were numerous scattered glandular structures. The acini and ducts were lined with low columnar epithelium, which was often moderately hyperplastic. The acini were in places round or ovoid while in other places they were elongated and tortuous, tending to be compressed by the dense stroma. Diagnosis: Adenoma simplex of breast with tendency to be intracanalicular fibroadenoma.

M. R., No. 2255, age 30, married, white. Admitted 10-21-34 with chief complaint of mass in the right lower breast which was noticed one month prior to admission and which showed no change in its size or general characteristics. Serology and laboratory work negative. Specimen consisted of a small mass of soft white tissue, the cut surface of which was white, glistening and rubbery. Microscopic section showed the glands to be increased in number, the acini and ducts generally compressed and elongated with an increase in the connective tissue of the stroma. The general architecture varied from beginning simple adenoma to pericanalicular and intracanalicular adenoma. Pathologic diagnosis: adenoma of breast (mixed type).

G. R., No. 23453, married, white. Admitted 1-25-37 with chief complaint of mass in right breast. Swelling in right breast had been noticed five weeks prior to admission and had shown slight progressive enlargement. The breast was definitely sensitive and tender. Serology and laboratory work negative. This mass on removal measured 5 cm. in diameter and was disc shaped, the cut surface of which showed a grayish yellow appearance studded with yellowish-brown spots. The epithelium was normal. The glands were surrounded by a small amount of loose stroma in which there was an occasional lymphocyte. The greater part of the section was made up of firm connective tissue rich in collagen. The glands on microscopic section were of average size and not increased in number although along one border the glands were distinctly increased in number and showed a mild change in the appearance of the epithelium with the cells smaller in size and more deeply stained. Pathologic diagnosis: Mild chronic mastitis with areas of simple adenoma.

M. M., No. 40529, age 50, married, white. Admitted 6-18-39 complaining of a mass in the outer half of the right breast which was non-tender and about 1 cm. in diameter. Serology and other laboratory information were negative. The mass following removal was small, white and encapsulated. It was composed of dense fibrous tissue in which lay enmeshed a large number of islands of breast tissue and a few dilated ducts. The acini at times became confluent and were larger than involuting structures. Pathologic diagnosis: Simple adenoma of breast.

M. H., No. 40831, age 42, married, white. Admitted 9-7-39 with a chronic mastitis of the left breast, post-abscess inflammatory reaction of the left breast, multiple abscesses of left breast which were treated with simple mastectomy 9-9-39. Serology and laboratory work were negative. Sections of the breast showed intense chronic mastitis with multiple abscesses from which staphylococcus aureus was cultured from the pus. Some of the sections from the region of the nipple showed a localized tumorous formation consisting of an adenomatous overgrowth of breast glands. The glands had taken on a different character and formed a loose network of acini lined by a low vacuolated epithelium. Diag-

nosis: Intense chronic mastitis with multiple abscesses, simple adenoma of breast.

S. T., No. 41926, age 15, single, colored. Admitted 3-14-40 with a chief complaint of lump in right breast which had been present for a year or more and which had increased progressively in size. Serology and laboratory work negative. On removal the tumor measured 5.5 by 5 by 4 cm. It was of uniform rather soft consistency and had a tan yellow appearance throughout. Microscopic section revealed a marked increase in the acinar structures in a fibrous stroma of varying density. The gland structures varied somewhat in size but generally were uniform and orderly. Diagnosis: Simple adenoma of breast.

B. P., No. 48623, age 21, married, colored. Admitted 4-11-41 with chief complaint of tumor in left breast. History of having had trouble with this breast post-partum two years prior to admission followed by the development of a lump in the outer lower quadrant of this breast. Serology and laboratory work were negative. On removal the specimen was a lobulated tumor mass 6 cm. in diameter, the cut surface of which was pinkish white. The microscopic section showed breast tissue which was composed of many actively growing ducts separated by strands of loose fibrous tissue in which there were loose scattered lymphocytes. Pathologic diagnosis: Adenoma of breast.

TREATMENT

Surgical removal is the only form of treatment. All solid tumors of the mammary gland should be removed regardless of the patient's age or sex. Such removal is imperative not only to relieve the patient's mind, but because only surgical removal supported by pathological examination can rule out malignancy, even though in the second and third decades of life malignant lesions of the breast are rare.

It is recommended that the growth be excised together with the corresponding sector of the breast in order to properly eradicate the lesion and prevent recurrence. The type of incision is not important and may be either the simple radial incision or the more esthetic circular incision in the fold of the breast or encircling the areola. X-radiation has been considered as an available form of therapy by some but this is not generally accepted.

SUMMARY

1. Ten cases of simple adenoma of the breast were found in 103,685 admissions in an obstetrical and gynecological hospital over a period of 20 years, giving an incidence of 1 in 10,000.

2. Simple adenoma of the breast is a benign tumor which may develop at any time during the reproductive period of life.

3. Simple adenoma of the breast is usually well encapsulated, freely movable, firm, solid and rarely attached to the skin and surrounding tissues.

4. Differentially, the greatest risk or error may be in the possible presence of malignant disease which may simulate fibro-adenoma. Accurate diagnosis is made only by microscopic examination.

5. The treatment is surgical excision.

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GRANULOSA CELL TUMOR OF THE OVARY

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In recent years there has appeared in medical literature an increasing number of case reports on granulosa cell tumor of the ovary. The most recent of these is a report from the Mayo Clinic covering 62 cases. At the American University Hospital this tumor has been seen but twice in the last twenty-five years despite the fact that the tumor has been sought diligently in the pathological material which has passed through our laboratories.

Granulosa cell tumors are the effeminizing tumors of the ovary. They secrete excessive amounts of estrogen and possibly some progestin. The changes they produce are the result of estrogenic stimulation. They cause the most striking changes before puberty and after menopause. During the period of sexual activity little change may be induced because the ovaries are already in full activity. Before puberty these tumors give rise to precocious sexual maturity; after the menopause sexual rejuvenation is the clinical picture.

Incidence.—Novak and Brawner found 20 such tumors from among the 40,000 gynecological specimens of the Johns Hopkins Hospital. It comprises about 10 per cent of all solid malignant ovarian tumors. The tumor may develop at any age. Less than 10 per cent occur before puberty; 30 per cent after menopause; the majority of cases, between the ages of 30 and 50 years. It is more frequent in childhood than in old age. During the past 8 years 2 cases have been seen in the American University Hospital.

CASE REPORTS

Case 1: Mrs. M. M. M. admitted to Gynecological Service on November 7, 1945. Past medical history negative except for amœbic colitis 2 years ago—treated. Age, 45; married 20 years; 3 living children, youngest 14 years. Four abortions (4, 3, 2, 2 months—all induced) last 5 years ago.

Chief Complaint: Severe attacks of pain in the right lower quadrant of the abdomen and back without fever of 2 years' duration diagnosed as amœbic colitis and chronic appendicitis and treated by hot applications externally with temporary relief. One doctor diagnosed "enlarged right ovary" and gave foreign protein injections with relief for approximately 2 months. Symptoms are occasionally associated with heavy meals. Menstruation before present illness was regular; once every 30 days, 4 days' duration, moderate amount; last menstruation September 15, 1945. Menses became irregular in present illness, coming once every 15 to 20 days with periods of amenorrhea lasting about 2 months. Menses have been scanty during the last 8 months.

Physical Examination: There are no positive findings except for slight tenderness on deep pressure over the right lower quadrant. An enlarged, hard, discrete lymph gland in the right inguinal region, 2 cm. in diameter, is palpated.

Pelvic Examination: External genitalia are normal. A cystic tender mass in the right and left fornix about 4 cm. in diameter can be palpated. Both tubes are palpable and tender. Anterior and posterior fornices are normal. Cervix is lacerated, soft, directed anteriorly. Uterus is in normal position, slightly enlarged; motility is limited.

Laboratory Study:

R. B. C.	4,390,000 per cu. mm.
W. B. C.	8,600 per cu. mm.
Blood Urea Nitrogen	12 mg. %
Blood Sugar	80 mg.
Blood Wassermann	Negative
Urine Examination	Negative
Urine Culture	E. coli communis
Stool Examination	Negative
Stool Culture	Negative

X-ray of Chest: Essentially negative.

X-Ray of Gastro-Intestinal Tract: Mild gastritis and spastic colitis; no demonstrable ulcers.

Operation: Patient was operated upon Novem-

ber 17, 1945. About 25 c.c. of cloudy, hemorrhagic, free fluid was found in peritoneal cavity. Peritoneum was smooth. Extensive pelvic and intestinal adhesions were found between the uterus, ovaries, and tubes. Uterus was invaded by small nodules of tumefaction on its surface. Uterus was larger than normal. Both tubes were tortuous. The ovaries were replaced by papillary cystic tumefaction about 4 cm. in diameter. The posterior lumbar-sacral lymph nodes were enlarged. *Bilateral salpingo-oophorectomy and supravaginal hysterectomy* was done.

Post-Operative Course: Uneventful.

Pathology: Specimen consists of the fundus uteri, tubes, and ovaries. The fundus uteri is 6x5x4 cm. The mass that represents the left ovary is 5x4.5x3 cm. and the mass that represents the right ovary is 7x3.5x3.5 cm. and contains a gelatinous cyst 2.5 cm. in diameter. Both masses have a nodular surface with adhesions to the tubes. Secondary small tumors are seen on the peritoneal surface of the fundus. (Fig. 1).



Fig. 1.

(a) *The Fundus Uteri:* The fundus uteri is 6x5x4 cm. The thickness of the uterine muscle is 13 mm. The thickness of the endometrium is 5½ mm. On the anterior surface of the uterus there are several small nodules. In different fields there is invasion of the uterine muscularis by islands of endometrium—adenomyosis, and the endometrium shows a marked degree of hyperplasia—Swiss cheese type.

(b) *The Fallopian Tubes:* The fimbriated ends of both tubes are incorporated in the corresponding masses. However, on the left side, the tube is transformed to a cystic mass 2 cm. in diameter. This mass, on section, contains gelatinous material and fungating tumor projections.

(c) *The Masses Representing the Ovaries:* The right mass is 7x3.5x3.5 cm. and the left mass is 5x4.5x3 cm. Both are rounded, smooth in some parts, nodular in others. Both are solid and firm and on section have 2 distinct components, a peripheral layer of ordinary ovarian stroma surrounding a whitish tumor which is firm in texture and has a tendency to lobulation.

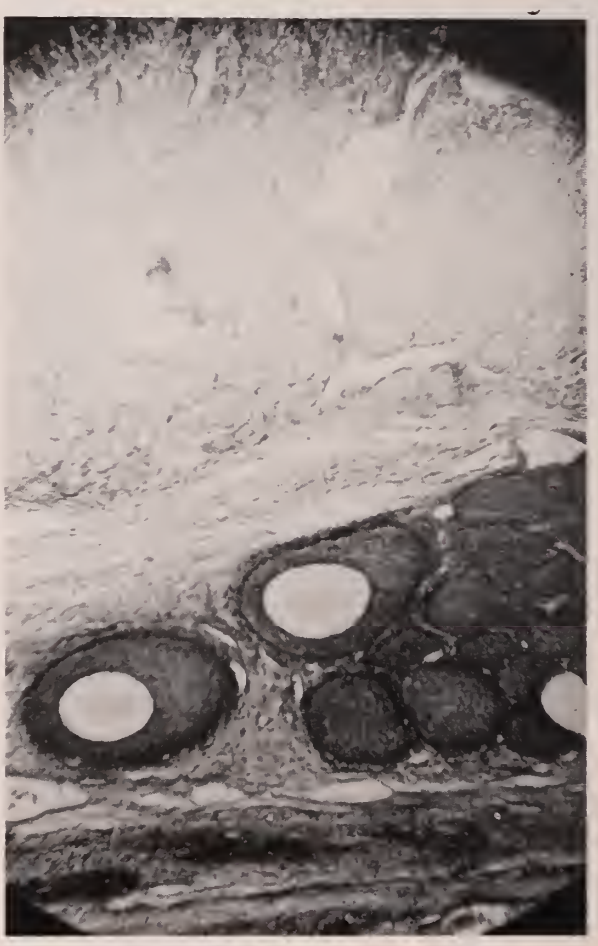


Fig. 2.

Microscopic Examination: The ovarian stroma is invaded by a neoplasm. The tumor is actually multiform, i.e., in certain areas it is in sheets, in others,

spindle cells, and in others, pseudoalveolar arrangements are seen. Some of the large pseudoalveolar spaces contain colloid. The small ones are very numerous and some of them convey the impression of aborted ova. The tumor cells are very pleomorphic, with very indistinct cell boundaries. Their nuclei are round or oval, hyperchromatic, vesicular, and do not possess prominent nucleoli. Mitotic figures are numerous and tumor giant cells are seen in different fields. The tumor has invaded the mucosa of the fallopian tubes. (Fig. 2).

Pre-Operative Diagnosis:

1. Chronic pelvic inflammatory disease with adhesions
2. Chronic salpingitis, bilateral
3. Cyst of the ovaries, bilateral.

Post-Operative Diagnosis:

Papillary cyst adeno-carcinoma of the ovaries with metastasis.

Histological Diagnosis:

1. Bilateral granulosa cell tumor of the ovary—malignant with metastasis
2. Hyperplasia of the endometrium.

A follow-up examination on this patient one month after operation revealed extensive metastasis to the lungs.



Fig. 3.

Case 2: Mrs. T. A. K., age 36 years, married 17 years, gravida III, para II (one stillbirth 4½ years ago) was admitted to Gynecological Service on January 22, 1937.

Chief Complaint: Menorrhagia of 20 years duration, 8 days flow, profuse amount, irregular cycle. This condition changed to meno-metrorrhagia 4½ months ago. There has been no pain and no fever.

Physical Examination: There is a firm, movable tumor size of a 7 months pregnancy arising from the pelvis.

Pelvic Examination: External genitalia are normal and fornices are clear. Cervix is normal. The uterus is enlarged, anterior, and to the right of the mass. The mass seems to be arising from the left lateral part of the uterus, but does not form a part of it. There is no tenderness. Patient was subjected

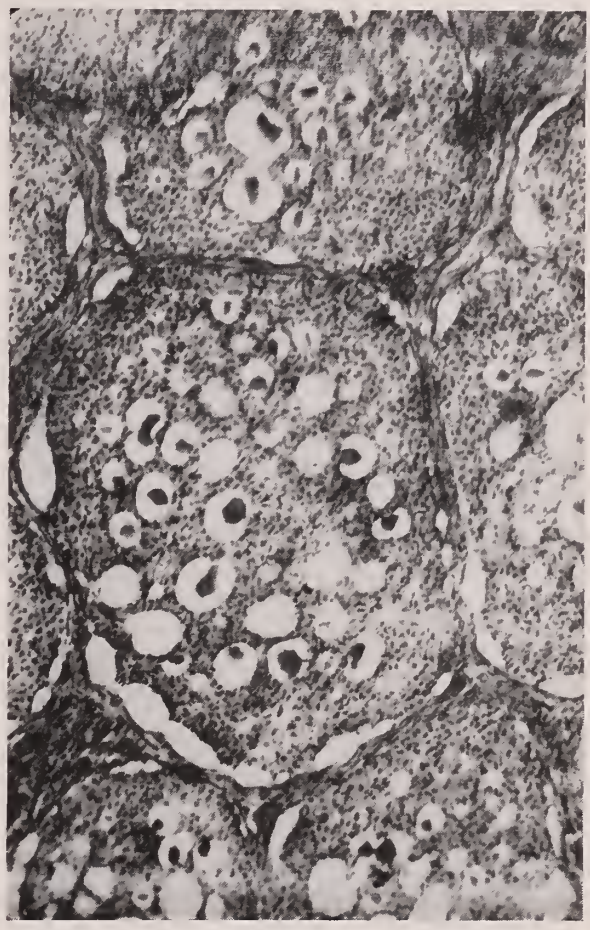


Fig. 4.

to operation on January 23, 1945. Uterus was the size of a 3 months pregnancy, symmetrical, hard and fibrotic. Both tubes and right ovary normal. Left ovary was replaced by a tumor about 15 cm. in diameter.

Operation: Left salpingo-oophorectomy, supravaginal hysterectomy.

Post-Operative Course: Uneventful.

Pathology: Specimen consists of left ovary, tube and uterus. A round symmetrical tumor 15x15 cm. adherent to the tubes has replaced the left ovary. It is rounded, solid, smooth, and firm. On section it is covered with a peripheral layer of ovarian stroma; the mass is yellowish, cuts easily, firm in texture, apparently globulated. (Fig. 3).

Histology: The ovarian tumor is enclosed within a thin layer of ovarian stroma. The neoplasm has developed in the form of nests surrounded by loose ovarian stroma. In some of the large nests the cells are in solid sheets, while in others the sheets surround large spaces which contain a thin colloid material. In the smaller nests the tumor cells have taken a pseudoalveolar arrangement, and in many of the spaces thus formed thick colloid is found. Scattered throughout the tumor are nests which resemble atypical graafian follicles.

The tumor cells are very pleomorphic. In the large nests they are polyhedral with delicate cell membranes, pale granular cytoplasm, and round or oval vesicular nuclei, each containing a single prominent eosinophilic nucleolus. In the smaller nests the cells are compressed and have taken a columnar or spindle appearance. In some foci the cells are arranged radially. The nuclei are hyperchromatic and each contains a single prominent eosinophilic nucleolus. The endometrium is hyperplastic of the Swiss cheese type. (Photo-micrograph of histology, Case 2. Fig. 4).

Pre-Operative Diagnosis: Uterine fibroid, pedunculated.

Post-Operative Diagnosis: Left ovarian cyst, fibrosis uteri.

Histological Diagnosis: Granulosa cell tumor of ovary; chronic metritis with fibrosis.

Patient came for check-up only once 6 months later and could not be followed after that visit. Pelvis was clear at the time of this last examination and there was no evidence of recurrence or spread.

DISCUSSION

Two granulosa cell tumors are presented which were not diagnosed except by the histological examination. This was probably due to the fact that the hyperestrogenism occurred while our patients were still having full active ovarian function. Granulosa cell tumors occurring in the adult period do not give striking symptoms.

The two cases illustrate the extremes which these tumors may present in the matter of malignancy. One was highly anaplastic and clinically malignant, the other histologically benign and the clinical course confirmed the histological impression.

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Schering Field Staff Increased.

The addition of 14 new representatives to Schering Professional Service staff has recently been announced by the Schering Corporation of Bloomfield and Union, New Jersey, manufacturers of endocrine and pharmaceutical preparations for the medical profession.

Twelve of the new representatives have been assigned to the Domestic Sales Division, for service in various territories throughout the country. Prior to assuming their duties they completed an intensive five weeks' training course in scientific and technical fields and in professional service. Two new representatives of the Schering Foreign Sales Division also completed the training course. These especially trained men are a part of the present Schering policy of expansion.

SCHICK, DICK AND TUBERCULIN TESTING IN A RURAL VIRGINIA SCHOOL

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Located on the southern shore of the Potomac river at Dahlgren, Virginia, is a rural grammar school which serves as the fountain of education for those children whose parents reside on the U. S. Naval Proving Ground. The school staff is composed of a principal and eight teachers; it is attended by approximately one hundred and sixty children; and the children are taught from the kindergarten through the eighth grade. Through the cooperation of the principal and students, a health program was recently instituted there; and a part of the findings comprise the body of this report. Since this school is comparable to many rural schools in the State of Virginia, these findings may be of interest to others.

This article is prefaced by stating that it is a report of the findings in this particular school. This study does not represent a cross section of Virginia's rural schools; the numbers considered are far too small to be of statistical value within themselves; and the isolation, abundance of fresh air and sunlight, and relative freedom from extreme poverty make this school somewhat unique.

In initiating this program, a routine history and physical examination was completed on every student and teacher. The status of general health was good, and malnutrition was a rarity. The results of this routine work will not be elaborated upon at this time, and the portion of the program concerned with preventive medicine will be presented.

If the level of student health is to be elevated by the intelligent application of sound epidemiological principles, the level of immunity (or susceptibility) must be known; therefore the Schick, Dick and tuberculin tests become mandatory in both students and teachers. A reduction in student morbidity and conservation of school days can be effected through the observance and exercise of these principles.

SCHICK TEST

The recommended technique was rigidly followed, and 0.1 cc. of a standard Schick test toxin was injected intracutaneously. The reaction was read and recorded after seventy-two hours. This test was performed to determine susceptibility to diphtheria.

SCHICK TEST DATA

Av. Age Yr.	Grade	Schick Pos.	Pos. Prev. Imm.	Schick Neg.	Neg. Not Imm.	Total Tests	Prev. Cases Diph.	Prev. Schick Tests
33	T	3	1	6	4	9	0	3
. . . . .								
13	8	1	1	21	5	22	1	17
12	7	1	0	18	2	19	1	12
11	6	0	0	11	4	11	1	3
10	5	1	1	19	3	20	0	10
9	4	0	0	20	3	20	0	5
8	3	1	0	12	2	13	0	3
7	2	2	1	13	1	15	0	5
6	1	8	3	13	1	21	0	6
5	K	3	0	17	0	20	0	1
Totals		17	6	144	21	161	3	62

In this school, 89% of the children tested were Schick-negative (possessed more than one-thirtieth unit of circulating antitoxin per cc. of blood serum); and are relatively protected from clinical diphtheria with its complications and sequelae. The past incidence of diphtheria among this group is 1.8%, which means the disease has been virtually eliminated from this community by immunization, but not the presence of virulent *C. diphtheriae.* Inoculation with some form of antigenic material had occurred in 80% of these children, resulting in a Schick-conversion rate of 94.5%. This rate is in accord with that reported by Fulton and his colleagues (1942) in their survey using APT. Alum-precipitated toxoid alone was used as the antigenic material in 80% of these children, and in the remaining 20% it was combined with various other antigens. There were no failures of Schick-conversion noted in those children inoculated with the combination of antigens; however, these are of more recent vintage, and have not enjoyed the wide use of the APT alone. Since 5.5% of those inoculated failed to develop enough circulating antitoxin to effect protective immunity, it becomes important that inoculation be followed in three to six months with a Schick test; and those who are Schick-positive further inoculated. If we wish to approach 100% protection by artificial inoculation, use of the Schick test is inevitable. Although the failures of Schick-

conversion are few, they are sufficient to provide the community with clinical diphtheria, even though every inhabitant was inoculated. We must realize that virulent diphtheria bacilli are always present in a community; and those persons not inoculated, and those receiving insufficient toxoid will perpetuate the disease.

Even the scant data presented here enables one to realize that active immunity is acquired rather rapidly after the school age is reached by contact and subclinical infection; and by adulthood 70% to 80% of the population will be Schick-negative. Therefore our efforts must be directed to that period of life elapsing between the disappearance of inherited immunity and the subsequent development of immunity from subclinical infection (one to six or eight years of age).

In this group of children 38.5% had been Schick-tested previously, indicating that some of the parents are aware of the value of this test, and do not rest in the false security conferred by inoculation alone. Grant (1945) in his recent survey emphasizes the fact that latent immunization of a community goes on rapidly by contact with carriers of virulent bacilli, and also the favorable modification of the clinical disease in Schick-negative individuals as contrasted with its malignant and fulminating character in those who possess inadequate immunity for Schick-conversion.

DICK TEST

Using a standard scarlet fever toxin, 0.1 cc. was injected intradermally, and the results read and recorded after twenty-four hours. This test was performed to determine susceptibility to scarlet fever.

DICK TEST DATA

Av. Age Yrs.	Gr- ade	Pos. Dick Pos.	Pos. Freq. S.T.*	Pos. T.P.*	Neg. Dick Neg.	Neg. Freq. S.T.*	Neg. T.P.*	Total Tests	Prev. Dick Test	Prev. Cases Scar. F.
33	T	1	1	1	8	0	7	9	2	1
13	8	7	2	4	15	7	10	22	0	1
12	7	12	2	5	7	3	3	19	0	2
11	6	7	4	3	4	0	3	11	0	0
10	5	12	5	6	8	2	6	20	1	2
9	4	15	5	10	5	2	3	20	1	1
8	3	11	6	6	2	1	2	13	0	2
7	2	9	5	6	6	2	3	15	0	4
6	1	20	11	15	1	0	0	21	1	0
5	K	19	6	16	1	0	1	20	0	1
Totals		112	46	71	49	17	31	161	3	13

*S.T.—Sore Throats and T.P.—Tonsils present.

The preceding data show 70% of these children to be Dick-positive reactors and susceptible to the scarlatinogenic streptococci. The per cent of positive reactors here is practically the same as that obtained by Dyer and his colleagues (1926) in their rural survey. Of the 30% of Dick-negative individuals, 8% had been victims of scarlet fever; we may safely presume that 22% acquired active immunity by subclinical infection of the scarlatinogenic streptococci. Very few of these children show active immunity acquired through subclinical infection before approaching adolescence; but one can accurately assume that only 20% to 30% will be Dick-positive reactors after adulthood. In view of the data presented, there is no statistical basis for any conclusion regarding the absence or presence of tonsils and the frequency of sore throats in the process of developing immunity through subclinical infection. The only conclusion tenable is that there are more tonsils present in the younger age groups, and these possess less immunity to scarlet fever.

The Dick-positive reactors here are approximately triple the per cent reported by Grand and Purvis (1945) in their survey; but this is explained by the younger age group tested and their natural isolation from urban congestion with its bacterial exchange. Pike and Fashena (1946) report a greater incidence of group A hemolytic streptococci present in the tonsils of children from five to nine years of age, and subsequently a marked decrease in incidence and replacement by group C. Their findings justify the frequency and severity of scarlet fever in pre-school age children, for they have had very little contact with this organism and hence have developed no immunity. Also, it appears to explain the rapid disappearance of susceptibility upon approaching adolescence and adulthood, for previous contact with the offending organism has resulted in sufficient active immunity to render them non-susceptible.

The Dick test for susceptibility has been sadly neglected in public schools and the practice of medicine. Practically all sporadic cases of scarlet fever should be subsequently checked with the Dick test to confirm the clinical diagnosis, especially if the case is doubtful or atypical. This test is of paramount importance in the conservation of school days when scarlet fever is endemic or potentially epidemic; for those children who are Dick-negative

should not be forced to remain at home following exposure and sacrifice valuable school days. The results presented show that 42% of the children in the upper five grades of this school could safely attend school every day without endangering themselves or others, even in the face of an epidemic. Through the employment of this simple test, much useful information may be gleaned.

TUBERCULIN TEST

The intradermal (Mantoux) test was employed, and 0.005 mg. purified protein derivative injected. The tests were read and recorded after forty-eight hours. Standard recommended technique was observed. This is a test for the sensitivity to the protein of the tubercule bacillus which results from infection.

TUBERCULIN TEST DATA

Children		
Total Tests	161	
Tuberculin Positives	23	(14%)
Active Cases Discovered	1	(0.6%)
Active Tuberculosis in Family	2	(1.2%)
Rotengenograms of Chest	23	
Calcified Gohn Lesions	6	(26%)
Teachers		
Total Tests	9	
Tuberculin Positives	5	(55%)
Roentgenograms of Chest	5	

Of the nine teachers tested, 5, or 55%, were tuberculin-positive; and of the one hundred and sixty-one children, 23 or 14% were positive. This means that 14% of these children have been subjects of a primary tuberculous infection, and may possibly harbor virulent acid-fast bacilli in their fibrotic or calcified lesions. The chests of all tuberculin-positives were subsequently x-rayed, and one case of active minimal pulmonary tuberculosis discovered. Calcified Gohn lesions were observed in 6, or 26%, of these roentgenograms. Inquiry revealed children from only two families with active pulmonary tuberculosis in the immediate family.

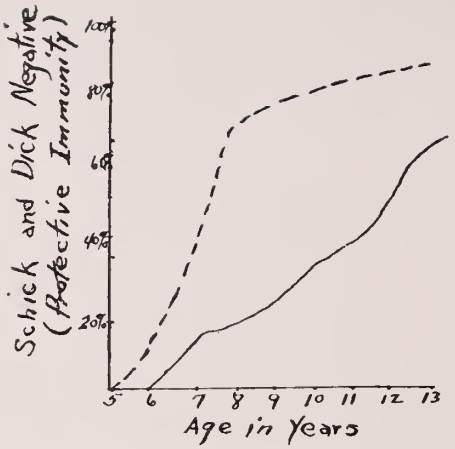
The active case of tuberculosis discovered was present in a male child eight years of age, and he gave a three plus tuberculin-test characterized by a local, focal, and generalized reaction. The paternal parent is known to have active pulmonary tuberculosis, and this child should have been diagnosed previously by the family physician. It is the universally accepted responsibility of every physician who diagnoses a case of active pulmonary tuberculosis, primary or reinfection, to tuberculin test and x-ray the chest of every member of the immediate family. This responsibility can not be shirked if we are to control the spread of tuberculosis.

Since most reinfection tuberculosis becomes manifest in the late teen-ages or early adulthood, the tuberculin test among school children has suffered a marked loss of popularity. This is regrettable, for the tuberculin test is one of the few tests which is significant whether negative or positive. Periodic testing of school children who are tuberculin-negative is one of the most efficient ways of discovering the primary infection. The tuberculin test may become positive before clinical signs and symptoms are manifest, especially in those cases with a good prognosis. In these cases which make an uneventful recovery, our only problem is spread of the disease; therefore, by discovering and isolating the primary infections, spread of the disease will be decreased. Periodic testing would allow us to eradicate active tuberculosis from the schoolroom. Myers and colleagues (1945) have pointed out that the progress of tuberculosis control in a community can be determined by periodic tuberculin testing; for any increase or decrease in the basic per cent of positive tests among children reflects the progress or failure in the control of active adult tuberculosis.

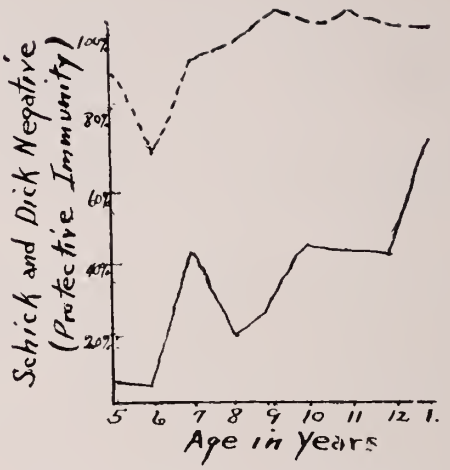
The tuberculin test must be used in conjunction with the roentgenogram if active tuberculosis is to be controlled. Very little progress can be made using either alone. Gass and colleagues (1943), in their studies, found roentgenographic pulmonary calcification in large numbers of school age children who showed a relatively low percentage of positive tuberculin reactions. Sweary (1933) found that only 20% of the primary tuberculous infections in the chest showed detectable roentgenographic changes. Therefore, roentgenograms alone would miss 75% to 80% of these cases.

The tuberculin patch-test has many obvious advantages; and Reisman and Grozin (1941) state that the non-commercial tuberculin patch-test is reliable, and compares favorably with the intradermal (Mantoux) test performed with 0.1 mg. of a 1:1000 dilution of old tuberculin. The literature is filled with discussions concerning this and various other methods. For routine periodic testing, the patch-test is cheap, easily applied, may be used by a school nurse, and will certainly suffice where the Mantoux is not available.

COMMENT



Graph I. Protective Immunity acquired by subclinical infection as related to age in this school.



Graph II. Total per cent showing protective immunity as related to age in this school.

------ Diphtheria
——— Scarlet Fever

The status of active acquired immunity due to subclinical infection by the scarlatinogenic streptococci of scarlet fever and the bacilli of diphtheria in this school is depicted above in Graph I. Active acquired immunity in the absence of clinical infection is very similar in both scarlet fever and diphtheria. Following birth the inherited immunity to these diseases disappears after six months to one year; then it begins to rise again at four to six years of age and reaches a maximum in adulthood with 75% to 80% of the population possessing adequate protective immunity (Schick negative and Dick negative).

Graph II represents the general level of protective immunity in this school. The immunity to diphtheria is excellent, and with a little work can be made to approach 100%. An epidemic of diphtheria could not occur in this school. Immunity to scarlet fever is very poor, and our only safeguard from an epidemic is the low invasiveness of the organism and clinical vigilance with prompt isolation of all Dick-positive reactors when the disease is present. The high immunity to diphtheria has resulted from the widespread artificial inoculation of infants, and from the efforts of the State in making people conscious of the disease. The lack of immunity to scarlet fever can be explained by the natural isolation and low age of this group, and the absence of a generally satisfactory method of artificial immunization.

The health of that 86% of these children who are tuberculin-negative depends upon subsequent periodic tuberculin testing and x-raying of positives. There is no doubt that some of these children will succumb to the acid-fast bacillus during the prime of life; and their recovery as well as the spread of the disease will depend upon early recognition, treatment and isolation. Whether this 86% is fortunate or unfortunate will depend largely upon how well the spread of tuberculosis is controlled.

CONCLUSIONS

1. The requirements for admission to a State school should include smallpox vaccination, a negative Schick reaction, a known Dick reaction and a tuberculin test followed by a roentgenogram of the chest when positive.

2. These requirements must be complied with by teachers and students alike, for, due to their close association, their health is interdependent one upon the other.

3. Diphtheria inoculation should be performed early in life to avoid the adverse reactions associated with immunizing older individuals, and followed by the Schick test until conversion is effected.

4. The Dick test should be used more frequently to confirm clinical diagnosis, and to conserve school days lost by the isolation of Dick-negative children.

5. A tuberculin test should be performed on every child early in life and followed by a roentgenogram of the chest if positive. Those who are negative should be tuberculin tested periodically,

and when the reaction becomes positive every effort should be exerted to determine the exact status of the infection in the child.

6. We should become more cognizant of school health. The epitome of health is *mens sana in corpore sano*, and this should be the aim of Virginia for all of her school children—her generation of tomorrow.

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New Books.

The following are recent additions to the Library of the Medical College of Virginia and are available to our readers under usual library rules:

Artificial human insemination.

Boyd—Blood grouping. (Annals of the N. Y. Acad. of Sciences.)

DeLee—Principles and practice of obstetrics. 9th ed.

Gifford-Adler—Textbook of ophthalmology. 4th ed.

Hagan, *et al.*—The relation of diseases in the lower animals to human welfare. (Annals of the N. Y. Acad. of Sciences.)

Kamen—Radio-active tracers in biology.

Lawton—Aging successfully.

Modern medicine annual—1947.

Rasmussen—Some trends in neuroanatomy.

Shryock—The development of modern medicine.

Spock—The common sense book of baby and child care.

Wortis *et al.*—Physiological and psychological factors in sex behavior. (Annals of the N. Y. Acad. of Sciences.)

Upjohn Opens Chicago Branch.

On January 1, 1948, The Upjohn Company, Kalamazoo, Michigan, manufacturers of pharmaceuticals since 1886, will open a new branch office and warehouse at 1001 East 87th Street, Chicago, Illinois. The building is modern and functional in appearance and construction, and is located near the residential section of Chicago's south side, just a few steps from the Illinois Central Railroad's suburban service. This branch will employ about fifty people at the start in the office and shipping departments, and will enable the Company to give the best possible service to customers in the Chicago and Illinois areas.

Final Edition of "Courage and Devotion Beyond the Call of Duty".

The final edition of the book, "Courage and Devotion Beyond the Call of Duty," which is composed of official awards and citations received by U. S. medical officers during World War II, is now being prepared by Mead Johnson & Company, Evansville, Indiana.

Any physician, who has not already done so, should write to Mead Johnson & Co. advising them of the awards he has received and also send a typewritten or photostatic copy of his citations. The following additional information would be of assistance in compiling the material for this book: Present rank or rank at time of discharge. Branch of service. From what university and in what year M. D. degree was received. Date of entry into the service.

THE TREATMENT OF ACUTE NEPHRITIS*

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Richmond, Virginia.

We propose to discuss the treatment of the situation seen in a young adult who, a week or ten days after an upper respiratory infection or the so-called "strep throat", develops edema of the face, oliguria, and hematuria. This process which we term acute nephritis is, as everyone knows, a *generalized* disease. It is *not* a disease of the kidney alone, but rather some little understood process in which there is generalized arteriolar spasm with secondary elevation of the blood pressure in the acute stages and evidence of kidney damage in the later stage. Thus, there are two problems of management—one, the acute, and the other the subacute or convalescent phase.

Since the basic nature of the disease is little understood, there is no really specific treatment for the acute phase. The patient is put to bed and given food and fluids in moderation. The latter consist of water and fruit juices. The formerly recommended milk diet has not been so strictly followed. Protein is limited. The blood pressure is followed closely because its trend appears to be the most important item as to how the patient is progressing; if the pressure is stabilized or dropping you may feel a sense of relief; if it is rising, trouble may be anticipated. In any case, we are on the look-out for evidence of vascular disturbance in the brain, such as drowsiness, coma, vomiting, and *convulsions;* for signs of cardiac failure, such as dyspnea, hepatic engorgement, edema of lungs, and pleural effusion; and manifestations of kidney failure, such as further diminution of urinary output toward or to anuria.

It is felt that phenobarbital, or similar drug, should be employed where disturbance of the brain appears to be the chief difficulty. Should this drug not exert the desired control 3 to 5 grams of magnesium sulphate is given intravenously. If, following this, the blood pressure drops, the convulsions cease, and the patient rouses, it is felt that the desired effect has been attained and the medication may be repeated in some hours as indicated. When using magnesium sulphate intravenously, calcium gluconate is always kept at hand as the relaxation from the magnesium may be greater than anticipated. The calcium will promptly relieve the collapse occasionally induced by the magnesium. At times repeated spinal punctures have been employed to decrease the intracranial pressure.

In other cases cardiac failure has been our chief concern. This phase of acute nephritis is much more important than has been realized. In these patients rapid digitalization is desirable and digitoxin appears to be the drug of choice.

As a rule our attention is centered on the kidney, involvement of which is, as said above, only a part of the problem. If kidney failure seems to be the chief difficulty and less and less urine is being excreted, little can be done. In the presence of anuria operative procedures must be considered. Lumbo-dorsal sympathectomy has been done by Smithwick, as reported by Butler and Reyersbach.[1] Decapsulation of the kidney may be employed.

Toward the latter part of the acute stage anemia may be quite a problem. For this we have resorted to transfusions, always with some hesitation because of our anxiety over the possibility of a transfusion reaction adding to the burden of an already damaged kidney.

As you know, there is a close relationship between acute nephritis and infection, particularly streptococcus infection, so that it seems desirable to make use of pencillin. The sulfonamides were formerly advocated for the infection but it has always seemed to us that the risk of further damage to an already diseased kidney outweighed any possible benefit.

In the acute stage, then, we are interested particularly in the *brain* and *heart* as well as the kidneys and on the look-out to control evidence of activity in these areas.

The later stage is exemplified by the patient who appears to be entirely well and yet continues to show albumin, casts, and red cells in the urine, or these are increased over normal as in the Addis count, or the sedimentation rate remains elevated, or some combination of these changes exists. Should we consider such patients as having active disease and prescribe bed rest with the idea that we cannot

*Read at the Symposium on Therapy, February 18-19, 1947, Medical College of Virginia, Richmond, Virginia.

rest the kidney without resting the patient? Such a program may continue for months and months. In a few patients we have not seen what was gained on such a regime, as no evidence of improvement in the urinary findings took place in a year or more, and they seemed to be no better off than one who was fairly active for the same length of time. This question needs clarification but it would seem desirable to treat such cases as invalids as long as there is any evidence of disease of the kidney. At times this may be very indefinite as some of these cases go on to chronic nephritis.

Another question which frequently comes up in the later stage is that of attention to focal infection, especially the focus where infection seemed to initiate the process. This focus is frequently in the tonsils and we are faced with the problem of whether or not the tonsils should be removed, and, if so, when. Although the literature contains articles stating that such procedure is of doubtful value, clinical experience suggests the contrary, as follows: a patient we have followed for some months constantly shows abnormalities in the urine and an elevated sedimentation rate. He has a pair of large reddish tonsils. Every few months he comes in to say that he has a sore throat, examination of which shows no particular change from the previous visit; yet on these occasions his urine shows more albumin and, particularly, more red cells than at other times. Such experiences lead us to feel that foci of infection should be removed at the earliest reasonable time, say after the clinical state has been unchanged for a month.

In conclusion, we would like to draw your attention to a procedure which has no bearing on the treatment of acute nephritis, but may be useful in a somewhat similar state, i. e., peritoneal irrigation in cases where acute kidney shut-down has been provoked by transfusion reaction or sulfonamide poisoning. In a few cases irrigation of the peritoneal cavity with saline or other physiological solution has served to wash from the blood the toxic products which cannot be eliminated by the kidney and thus the patient has been kept alive sufficiently long for the kidney to recover and resume its normal function.

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1947 Edition of Parergon.

Parergon (work by the side of work) is Mead Johnson & Company's picture book of artistic works by physicians.

The current edition is a book of 208 pages and shows 1100 examples of creative art by contemporary physicians.

This book is available without charge only to physicians upon request of Mead Johnson & Company, Evansville 21, Indiana.

Popular Profession with German Students

More German university students want to take up medicine than any other profession, according to the Berlin correspondent of *The Journal of the American Medical Association,* writing in the October 18 issue of that publication. He states that this is particularly true in the American and Russian zones of occupation.

The number of registered medical students in the four zones is: American, 10,714; British, 6,430; French, 2,887; and Russian, 3,336 plus an unknown number from Rostock and Greifswald which do not give official figures.

At present however, the writer reports that many universities do not admit first year medical students. The chief difficulties are (1) the destruction of many of the university buildings, institutes, clinics and laboratories; (2) a shortage of textbooks, with those of a generation ago often the best available sources of instruction; (3) lack of housing.

"The percentage of women students is higher in the Russian zone than in western Germany," the correspondent adds. "In Berlin, for example, women constitute 40 per cent of the total, with an absolute majority at the Medical and Philosophical Faculties. In 1932 only one fourth of the students were women."

STREPTOMYCIN IN TUBERCULOSIS*

W. E. ROYE, M.D.,†
Richmond, Virginia.

The series of cases published by Hinshaw in the *J. A. M. A.*, November 30, 1946, is a complete summary of our knowledge to date.

In September, 1946, the American Trudeau Society and various governmental agencies began controlled observations of the use of streptomycin in clinical tuberculosis. All concerned have repeatedly warned that the drug is still in the experimental stage. A signed consent should be obtained from the patient prior to using the drug, and the study should have full laboratory control.

Preliminary unpublished data is presented to show some of the early observations in these controlled studies nationally as presented at a Conference in December, 1946.

Pulmonary Tuberculosis: (135 cases)

All cases presented were treated with 1.8 grams of streptomycin daily and were selected because of the high exudative component of the disease.

24% progressed better than is usually expected under bed rest.

59% did as expected with bed rest alone.

4% became worse.

The balance were discarded because opinions were too variable to be significant statistically. Results in empyema were poor. Fibrotic thick-walled cavities were not closed. No definite conclusions as to dosage and length of treatment have been reached. Different series varying from 90 to 120 days will be tried. Dosage varying from 1 to 3 grams daily is being observed.

Tuberculous Meningitis: (27 cases)

12 cases are living. Only one meets the criteria of complete cure. Intrathecal treatment on this case was continued until the 142nd day. Relapses when treatment was stopped in 40 to 75 days were reported.

The dosage is .1 gm. intrathecally daily combined with 1.2 to 4 gms. intramuscularly daily. A level of 20-30 micrograms per cc. was reached in the spinal fluid.

Soft Tissue Sinuses: (12 cases—55 sinuses)

When combined with excision or incision and drainage the sinuses have all closed and apparently remained closed. This does not apply to infected chest walls from empyema.

Tracheo-Bronchial Tuberculosis: (14 cases)

All cases fully healed in less than 3 months and have apparently remained healed. This is almost too optimistic to be true. Considerable attention is being placed on a large series at present to verify the results. Dosage was 2.5 grams intramuscularly and .5 gm. by aerosol daily.

Tuberculosis of the Larynx:

.5 gram has been used by aerosol, atomizer, and powder insufflations. Only about 50% were aided. Further study will be made by combining the above with intramuscular injection.

Gastro-Intestinal Tuberculosis: (Incidental to some of the pulmonary cases)

Favorable results have been obtained by combining the oral and intramuscular routes.

Bone Tuberculosis:

No facts of value to date.

G. U. Tuberculosis:

Series is not advanced enough to report.

LABORATORY STUDIES

It is essential that all cases have full laboratory control. Some of the tests are new and ingredients difficult to obtain. It is best that the laboratory have some advance practice in these tests.

The minimum requirements include stereoscopic x-rays, positive culture growing, urinalysis, NPN, urea clearance, complete blood counts, sedimentation rates, audiograms, caloric stimulation tests for vestibular damage, nude photographs, and congo red tests if amyloidosis is suspected.

Dilution of Streptomycin:

4.5 cc. of saline or distilled water to 1 gm. of drug. Any precipitate is allowed to remain in the ampule. Novocaine is added to the syringe but not to the ampule. With most lots the average patient will not need novocaine if the sites of the injection are rotated.

*Presented at the Symposium on Therapy, February 18-19, 1947, Medical College of Virginia, Richmond, Virginia.

†Chief of Section on Tuberculosis, McGuire Veterans Administration Hospital, Richmond, Virginia.

Toxic Reactions

Loss of hearing and progressive kidney irritation are regarded as irreversible and necessitate the cessation of the drug. A serum streptomycin level above 50 micrograms per cc. is regarded as evidence of serious kidney damage.

Exfoliative dermatitis, purpura, and bone marrow depression have been reported.

Vertigo, eosinophilia, fever, nausea, and flushing of the skin occur during the treatment of nearly every case.

The damage to the vestibular apparatus is permanent. Most of the patients develop a compensatory mechanism. The occasional patient that does not develop the compensatory mechanism is a serious problem.

Conclusions

Streptomycin is a dangerous experimental drug. The physician should use it only with full laboratory control. The patient should sign a statement that he understands the limitations and the possible permanent damage.

At the present time, it is not justifiable to use streptomycin on any patient who is doing well under standard methods of treatment.

Doctor Gets Smaller Part of Dollar.

The proportion of national income spent for medical services actually has declined since 1940, according to a study made by Frank G. Dickinson, Ph.D., Director of the Bureau of Medical Economic Research of the American Medical Association. That this has happened in spite of the climbing cost of medical care and increased demand for medical services is emphasized in an editorial in the September 27 issue of *The Journal of the American Medical Association.*

The editorial states:

"Costs of medical care as a whole tend to move countercyclically; in a depression such costs comprise a larger share of total consumer expenditures and national income than they do in prosperous times. In a period such as the present, the trend is toward more furious inflation and lower relative expenditures for medical care. This is borne out by Dr. Dickinson's figures—medical care took 4.4 per cent of total consumer expenditures in 1932 and 1933, then the share trended downward to 3.9 per cent in 1946. Necessities always loom more important in depression; luxuries, in prosperity. But all evidence indicates that, case for case, medical care costs more each year—particularly where hospital care is concerned. Thus the decline in relative importance of medical care expenditures has occurred in spite of climbing costs of specific treatments and an over-all increase in demand for medical services arising from the aging population, the high birth rate and popular education in health which lessens fear of hospitals.

"The declining percentage of income expended on medical care is paralleled by increasing proportions spent on alcoholic beverages, recreation, personal care and jewelry; these items in the budget were selected by Dr. Dickinson not for moral reasons but for comparability in the size of total expenditures.

"Physicians will be interested to learn that their share of the medical care dollar has declined from 32 cents in 1929 to 27 cents in 1945. Part of this decline may have been caused by the absence of those physicians who were in the armed forces during 1945. The gap was filled chiefly by increases in the share of the medical care dollar spent for drugs."

The Leslie Dana Gold Medal,

Awarded annually for outstanding achievements in the prevention of blindness and the conservation of vision, was presented this year to Dr. Frederick H. Verhoeff, of Boston, Mass., during the Faculty Luncheon of the American Academy of Ophthalmology and Otolaryngology, in Chicago, October 16. Dr. Verhoeff was selected for this honor by the St. Louis Society for the Blind, through which the medal is offered by Mr. Leslie Dana of St. Louis. This highly prized token of recognition in the field of public health is given upon the recommendation of the Association for Research in Ophthalmology.

Dr. Verhoeff is Professor Emeritus of Ophthalmic Research at Harvard Medical School and Consulting Chief of Ophthalmology at the Massachusetts Eye and Ear Infirmary.

A CASE OF PROGRESSIVE BILATERAL BULLOUS EMPHYSEMA COMPLICATED BY CHEST TRAUMA*

HORACE ALLEN ALBERTSON, M.D.,
and
CHARLES H. PETERSON, M.D.,
Roanoke, Virginia.

We are reporting our one case of "progressive bilateral bullous emphysema" because it confused us in the interpretation of roentgenograms taken of a patient following chest trauma.

"Progressive bilateral bullous emphysema" is an entity distinct from the emphysema of the bullous type usually seen. In 1946 Allison Howe Price and George Teplick[1] of Jefferson Medical College collected 13 cases from the literature and reported 8 of their own. In their article they state that in the usual type of bullous emphysema any part of the lung may be involved, but in "progressive bilateral bullous emphysema" the disease usually begins in the apices and proceeds downward until in extreme cases both upper and lower lobes may be replaced by large cyst-like areas.

They further state that the disease is apparently limited to men and is usually seen after the second decade. The usual history is that of cough, slowly increasing dyspnea, recurrent respiratory tract infections, cachexia, and recurrent asthma-like attacks. Death usually occurs from intercurrent infections or when insufficient pulmonary tissue is left to carry on normal respiratory exchange.

Our patient was a 53 year old white male who was brought to the emergency room of the Jefferson Hospital around 9:00 P. M. the night of 4 November 1946. His story was that he had been attacked on the street. His assailant knocked him down and then kicked him in the left side of his chest. His past history was relevant in that for an indefinite length of time he had had a cough due to what he called a "bronchial condition".

When seen in the emergency room he had severe pain in the left side of his chest which was exaggerated by respiration and coughing. On examination it was found that he had marked tenderness over the 5th and 6th ribs in the axillary line on the left side. Breath sounds were diminished over the entire left lung, but it was difficult at the time to say whether the diminution was due to "splinting" or to some other cause. The percussion note was thought to be slightly hyperresonant. His temperature was 98.6, pulse 130, respiration 24. A tentative diagnosis was made of fractured ribs and possible traumatic pneumothorax of the left lung. Adhesive strapping of the lower left chest was done in the emergency room and he was admitted to the hospital.

In spite of moderate doses of morphine he continued to have pain. The pain was worse when he coughed. He attributed his cough to the previously mentioned "bronchial condition".

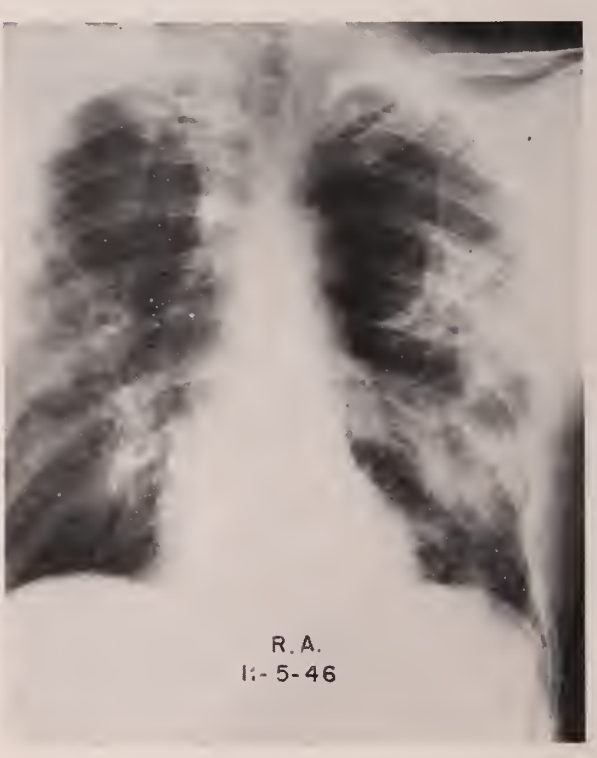


Fig. 1.

The next morning a portable x-ray of his chest was ordered (Fig. 1). It showed what we thought was a bilateral area of pneumothorax immediately adjacent to the mediastinum. The appearance was

*From Departments of Surgery and Roentgenology, Jefferson Hospital, Roanoke, Virginia.

symmetrical on each side. Both lungs were somewhat compressed with scattered areas of infiltration throughout. The left fourth, fifth and sixth ribs were fractured in the axillary line. No other definite rib injury was demonstrated. There was no free fluid in the chest. Laboratory work done this A. M. showed 14.35 gms. of Hb. and 15,750 Wbc; urine was essentially negative except for a trace of albumin. Blood Wassermann and Kahn were positive.

On his second hospital day his respirations became more labored and he was put in an oxygen tent. From time to time he expectorated a small amount of bloody sputum. His third and fourth hospital days were spent propped in bed in the oxygen tent, complaining of shortness of breath and pain in his left chest. His respiration varied between 20 and 40 and his pulse between 110 and 136. His fourth day he was mentally confused from time to time.

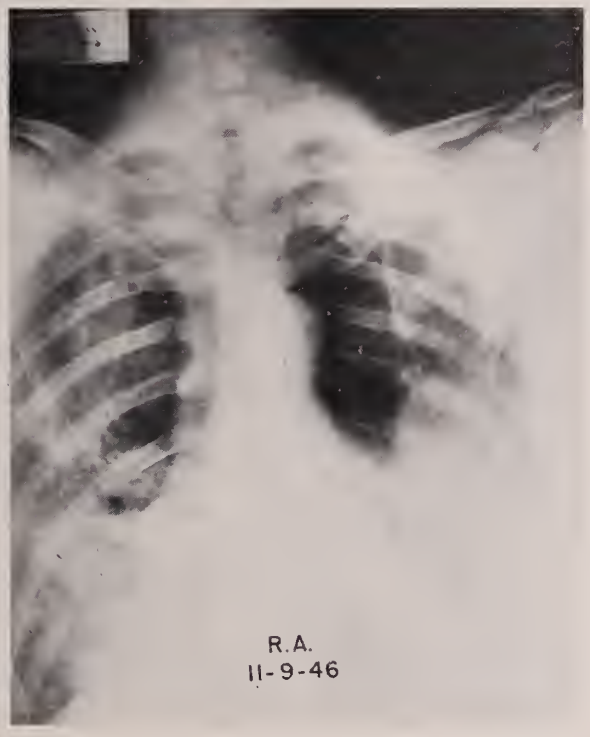


Fig. 2.

On his fifth day his temperature was elevated slightly and he was cyanotic from time to time in spite of tent oxygen. The night of the fifth day he became very restless and thrashed about in his oxygen tent despite morphine, sodium amytal and rectal paraldehyde given at various times throughout the night.

An emergency portable x-ray of his chest was taken around 10:15 A. M. the sixth hospital day (Fig. 2). This showed an increase in the amount of air on both the right and left sides. There was a greater compression of the lungs.

Shortly thereafter a needle aspiration of the left thorax was done. The needle was inserted just medial to the mid portion of the left scapula. Air was found under pressure and was released. His restlessness was relieved and his cyanosis cleared up for a short while. Because of the above relief an intercostal trocar was inserted in the same place as the aspiration had been performed. The trocar was strapped in place with adhesive. The patient died 50 minutes later.

The chief organ of interest at autopsy was this man's lungs. On opening the pleural cavity on the right it was found that air escaped under pressure with a hissing noise. Both apices were stuck to the parietal pleura with adhesions. The apices were freed and the heart and lungs were removed from the thoracic cavity in a block. The left lung was about 25 per cent collapsed. The superior part of the left upper and lower lobes was replaced or made up of two large emphysematous bullae which were about the size of oranges. The entire lung was dark purple in color and had many doughy areas. On cross section of the lung, numerous walnut-sized, doughy feeling, purplish areas were conspicuous. In the bronchi there was thick grayish tenacious sputum. The walls of the bronchi revealed nothing remarkable.

On opening of the large emphysematous bullae it was found that the bullae were divided into numerous partitions by thin, tough fibrous strands. There was also a small amount of straw-colored fluid in the left lung. On the lateral surface of the upper lobe of the left lung was a well circumscribed raised area about 2 to 3 cm. in diameter. It was hard and knotty.

The right lung was about 75 per cent collapsed. At the apex there were 4 emphysematous bullae, one about the size of a duck egg, another about the size of a hen egg and several the size of a walnut. Attached to or a part of the posterior, superior portion of the right lower lobe were several walnut-sized bullae. The lung was deep purple in color and

doughy in consistency throughout. The bronchi were found with a thick, purulent, grayish material.

The examination of the heart showed normal pericardium; no fluid in the precordial sac. The right and left ventricles were normal. The right and left auricules were not remarkable. The valves were all normal. The arch of the aorta showed marked athero-sclerosis.

The microscopic picture of this man's lungs showed alveoli which were filled with fluid and a large number of polys.

It is our opinion that this man had "progressive bilateral bullous emphysema" which was complicated by a trauma to his chest severe enough to fracture three ribs. If this patient had not entered the hospital as a traumatic case we believe the x-ray diagnosis would have been obvious. One of the members of our staff suggested "progressive bilateral bullous emphysema" when he saw this man's film but he was overruled by the majority of us who knew the patient's history. This man came in as an emergency case following trauma to his chest. Cough and "bronchial trouble" were just an additional part of his history. This is why we were looking for and attempting to interpret his plates on the basis of trauma alone, which autopsy proved could not be done.

SUMMARY

We have added to the literature one case of "progressive bilateral bullous emphysema"; also we have attempted to show how this entity may lead to confusion in the interpretation of x-rays of the chest in patients who have had chest trauma.

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"Nose Drops".

Those who have the habit of using "nose drops" day after day are doing themselves more harm than good, says R. Wesley Wright, M.D., Palo Alto, Calif., in the current *Archives of Otolaryngology*, published by the American Medical Association.

Dr. Wright cites the cases of patients who have suffered from nasal congestion for as long as four years before discovering that the nasal drops that gave them temporary relief were actually the cause of the discomfort. Sometimes more serious conditions were found, too: loss of the sense of smell; destruction of the nasal membrane. In all the cases that he reports the nasal congestion was relieved from 24 hours to a few days after discontinuance of the medication, although in at least one case the sense of smell had not yet returned.

"Vasoconstrictor" is the medical name given to compounds that cause constriction of the blood vessels, thus producing less swelling in the nose and giving a larger opening for the passage of air. But, says Dr. Wright, the use of synthetic vasoconstrictors is likely to bring about nasal symptoms which are often unrecognized as those of drug sensitization. Every time the effects of the drug wear off, the swelling returns to produce even more nasal congestion than before.

"The patient comes complaining of nasal congestion which is constantly present," he writes. "Nasal drops, whichever are being used, will open the nasal passages well, and the breathing space then seems normal, but the congestion returns in about three hours. . . . The dependence on the medication is such that the medicament is carried at all times by the patient. . . .

"The history of the onset of the condition for which the nasal medicament was used varies. Usually the condition was an acute cold or a recurrent attack of chronic sinusitis. In other instances the onset was the nasal congestion associated with pregnancy. . . . The patients were given drops to use until term, but the nasal congestion presisted. During colds they were given drops to use, or obtained them, and though the discharge usually ceased, the patients assumed that the condition had become sinusitis or some other chronic nasal condition."

REVERSAL OF CARDIAC HYPERTROPHY BY EXCISION OF POPLITEAL ANEURYSM

RUDOLPH ANTONCIC, M.D., F.A.C.S.,*
Hamilton, Ohio

This report gives the case history of a patient with a traumatic popliteal aneurysm and a discussion of the physiology of the cardio-vascular changes before and after treatment.

J. F., a seventeen year old farmhand, was admitted to Pulaski Hospital on June 2, 1945, with a 22 caliber rifle bullet wound of the right thigh. The shooting had occurred about two hours before admission and several turns of baling wire had been applied as a tourniquet at mid-thigh. The boy showed no evidence of shock. All pertinent findings were limited to the right lower limb. The foot and especially the toes were purple black. Sensation was absent in the toes. The wound of entrance was in the lateral thigh about 4 inches above the knee. The bullet had traversed the thigh without fracturing the femur (x-ray) and emerged medially just proximal to and slightly inferior to the adductor tubercle.

The baling wire was immediately removed; the wounds were debrided and the regional skin cleansed with soap, water, ether and merthiolate. A snug dry dressing was applied. The patient was given 1/75 grain of atropine sulfate intramuscularly to inhibit reflex arterial spasm due to trauma (de Takats). Antitetanus and gas injection was administered and prophylactic oral sulfadiazine prescribed. The patient was put to bed with the affected limb in a slightly dependent position to take full advantage of the venous hyperemia. The color of the foot had improved to a dusky blue. The dorsalis pedis and posterior tibial arteries were not palpably pulsating on the right side. There was a slow but definite return of color to areas blanched by digital pressure. Six hours later the foot was only moderately cyanosed.

Seven days after the injury the exit wound showed a scant purulent discharge and a diffuse pulsating tumor measuring 8x5x3 cm. was noted. A loud harsh bruit with systolic amplification was audible over the mass and could be heard transmitted through the patella. There was a palpable thrill with systolic accentuation. The dorsalis pedis and posterior tibial pulsations were absent on the right. The peripheral veins were slightly distended and the toes were cooler than on the left. Slight edema was present. Five days later the wound was dry and pressure obliteration of the aneurysm caused the pulse to drop from 66 to 54 per minute and the blood pressure to rise from 110/44 to 116/60. On obliterating the aneurysm the foot rapidly became cyanotic. The blood pressure and pulse changes and the systolic accentuation of the bruit are considered pathognomic of arteriovenous fistula.[1] A teleroentgenogram on the 9th day after injury showed the heart to be of normal size (fig. 1). The patient

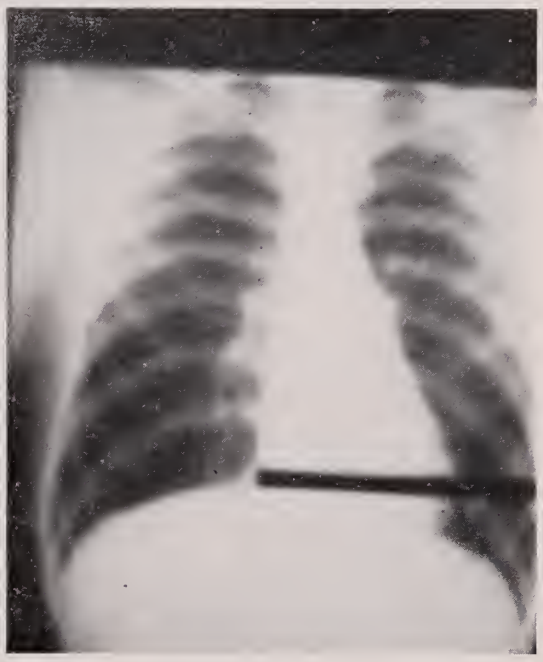


Fig. 1.

was discharged 12 days after admission and then was seen every two weeks and studied for the development of collateral circulation. The patient's brother compressed the aneurysm manually, using a felt pad two or three times daily and increasing from 1 to 20 minutes. As shown many years ago

*Recently of Pulaski, Virginia.

by Matas, such systematic obliteration of the aneurysm will stimulate the development of collateral circulation.

The patient was readmitted on August 27, 1945 (12 weeks after the injury). At this time compression of the aneurysm for 30 minutes caused only a slight cyanosis of the foot. The Moschcowicz hyperemic test indicated adequate collateral circulation. The teleo on August 27, 1945, showed moderately severe cardiac hypertrophy (fig. 2). After three days of bed rest the patient was operated upon.



Fig. 2.

Operative Technique.—With the knee flexed and the thigh abducted and externally rotated the popliteal space was approached from the medial thigh. No tourniquet was used in order that the distended vessels might be more easily identified. The sartorius muscle and adductor magnus tendon were mobilized and the aponeurotic roof of Hunter's canal opened. The femoral artery and vein were then isolated and held with tape just above the site of entrance into the adductor magnus. The popliteal artery and vein deep in the fossa distal to the aneurysm were similarly under-run with tape, thus controlling the major vessels. The arteriovenous aneurysm involved the upper half of the popliteal vessels. The popliteal artery and vein were then isolated proximally and distally to the fistula as close to the aneurysm as feasible, saving every collateral possible. Quadruple ligation of the proximal and distal popliteal vessels was done, using heavy silk ligatures on the artery which was emptied before being doubly tied. The arteriovenous fistula and a 1 cm. aneurysmal sac coming from the medial side of the artery at the level of the arteriovenous communication were dissected out of the muscle bed, ligating a few small vessels that entered the sac from below. The entire aneurysm consisting of small segments of popliteal artery and vein proximal and distal to the fistula and the small sac mentioned above were excised. The fistula measured 5 to 6 millimeters in diameter. The wound was closed and elastic compression applied. The post-operative blood pressure was 138/56, indicating that the increased peripheral resistance occasioned by the tying of a large artery plus the shunting of the volume of blood going through the fistula into the general circulation



Fig. 3.

raised the systolic blood pressure. Several hours later the toes were slightly cyanotic but there was a prompt return of color after digital blanching and the skin was warm. On the third post-operative day the operated limb appeared quite like the normal one except for slight edema. The wound healed

nicely and the patient was discharged 21 days after admission. The final teleo 20 days after excision of the aneurysm showed the heart to be even smaller (fig. 3) than that shown in figure 1, suggesting that slight cardiac enlargement had already occurred within a few days following the formation of the fistula.

Circumferential measurements of the legs and thighs at fixed points from the patella gave the following results:

Before operation (in inches) 19 days after operation
1. calf 12½ r. calf 13 1. calf 12 r. calf 12
1. thigh 17½ r. thigh 18¾ 1. thigh 17 r. thigh 16½

The increased volume of the limb with the aneurysm was decreased after operation so that the thigh measured two inches less in circumference. The control thigh showed a decreased circumference of ½ inch persumably due to atrophy of bed rest.

The patient was last seen 14 months after operation. There was no recurrence. The blood pressure was 122/60. The patient was doing farm work and had no complaints.

DISCUSSION

In the presence of a moderately large arteriovenous fistula cardiac dilatation occurs very quickly. In this patient the chest film showed a slight cardiac enlargement already present on the 9th day after the injury. Dilatation of the heart is part of the generalized dilatation of vessels comprising the short circuit of heart, artery, fistula and vein.[2] The heart hypertrophies in response to the increased volume of blood going through it per unit of time. In a large arteriovenous fistula 50 per cent of the blood volume may in time be diverted from the general circulation, resulting in a decreased peripheral resistance. As the blood volume is restored in the general circulation to maintain the blood pressure the total volume going through the heart may be almost doubled.[3]

Compressing the fistula shunts the mass of blood going through the fistula into the general circulation and raises the blood pressure. The raised pressure in the carotid arteries stimulates the carotid sinus reflex which slows the heart via the vagus nerve.

Delaying the operation for 3 to 6 months allows for the development of adequate collaterals, absorption of the hematoma, subsidence of infection and the occasional spontaneous cure of a small arteriovenous fistula. If the operation is delayed too long the cardiac hypertrophy may go on to cardiac failure.

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133 North Second Street

Preventing Runaway Epidemics.

Since the end of the second World War there have been no runaway epidemics in Europe, and only one disease, cholera, has reached epidemic proportions in the Far East.

In an article in the September issue of *Hygeia*, Virginia Rishel, Washington, D. C., who is on the staff of UNRRA, calls this an achievement which can be credited to "one of modern history's happiest triumvirates: the new methods developed by medical science between the wars, their bold use by the Allied armies and the now defunct UNRRA— and luck."

"The new products," Miss Rishel writes, "included DDT, death warrant for insects, and sulfas and penicillin. DDT stopped typhus dead in its tracks and reduced malaria in Greece to its lowest incidence since classical times. The sulfas and penicillin spectacularly cured and thus curtailed the spread of dysentery, venereal disease and a plethora of other infections.

"The health staffs of the Army and UNRRA went into action before the guns ceased firing. The Army gave medical care to the populations of the villages they liberated, and to the enemy countries they occupied. UNRRA set on their feet the health departments of 13 of the world's most devastated and disorganized invaded nations, and advised them how best to use both the new and the familiar supplies that began to arrive. UNRRA's professional medical staff was tiny but its supplies were a cornucopia of health—200,000 long tons of everything from chlorine to x-ray apparatus, from hypodermic needles to hospital beds.

PUBLIC HEALTH

L. J. ROPER, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for September 1947, as compared with the same month in 1946, and for the period of January through September 1947, compared with the same period in 1946, is as follows:

	Sept. 1947	Sept. 1946	Jan.-Sept. 1947	Jan.-Sept. 1946
Typhoid and Paratyphoid	27	12	98	97
Diarrhea and Dysentery	640	198	4,265	2,323
Measles	83	57	7,522	12,888
Scarlet Fever	42	94	936	2,175
Diphtheria	11	51	167	343
Poliomyelitis	55	19	114	87
Meningitis	2	12	85	180
Undulant	11	7	63	49
Rocky Mountain Spotted Fever	8	13	62	90
Tularemia	7	5	46	50

POLIOMYELITIS IN VIRGINIA

Moderate increase in poliomyelitis incidence during the past ten week period has again attracted attention to the inherent problems of the disease. Many years of reporting experience available in the State Department of Health demonstrate that August and September, and secondarily July and October, are the months of highest prevalence. This fact is well illustrated by the following tabulation:

TWENTY YEARS OF POLIOMYELITIS IN VIRGINIA BY MONTH OF REPORT

	Jan.-June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
	1927-1946							
Total Cases	335	627	948	795	484	251	92	3,532
Annual Average	16.7	31.3	47.4	32.7	24.2	12.5	4.6	176.6
Per Cent Distribution	9.5	17.8	26.8	22.5	13.7	7.1	2.6	100.0
	1947							
Total Cases	17	9	33	55	20.5*	10.6*	3.9*	149*

*Estimated. A total of 114 cases were reported through September 30, 1947, and 21 cases were reported through the fifteenth of October. A total of 135 cases have already been reported for 1947.

It is apparent that 49.3 per cent of the cases have been reported during August and September, with an additional 31.5 per cent in July and October, making a total of 80.8 for these four months. The estimated total cases for the last three months of 1947 are shown with the actual total number reported through September. Through the fifteenth of October a total of 21 cases have been reported, and this figure is in excess of the estimate for the month. This makes a total of 135 cases for the nine and one-half months.

The years of high prevalence are as follows: 1917, 1923, 1929, 1935, 1940 and 1944, and from this it may be noted that six year intervals separate the first four, a five year interval separates the fifth and sixth, and a four year interval separates the sixth and seventh. Undoubtedly the mass shifting of population groups into Virginia had much to do in lessening the cycle between outbreak or epidemic years. During 1944, the greatest year on record for poliomyelitis, a total of 756 cases were recorded and this was followed in 1945 by 335 cases.

The attack rates per 100,000 population by five year periods have varied from 4.3 to 9.4, with an average of 6.5. A total of 103 deaths have occurred in the 1,338 cases reported in the five year period 1942-1946, showing a case fatality rate per 100 cases of 7.7.

Geographic distribution of cases has shown concentration in the large city areas, with most scattered cases appearing centrally and in the western counties, and while incidence has been beyond expectation, the situation does not appear alarming.

CORRESPONDENCE

Care of the Tuberculous Should Have Legislative Appropriation.

Edwardsville, Va.
September 25, 1947.

TO THE EDITOR:

When the modern State Department of Health was organized in 1908, the first two objectives were to build and maintain a Tuberculosis Sanatorium and to equip and run a modern diagnostic laboratory. These are still the two branches of the Department that are most helpful to the general practitioner. Yet these are the services that have grown the least during the last decade.

Of what value is a county health unit or an x-ray clinic in finding cases of TB if our sanatoriums are not staffed so that we can send our early cases for treatment and hygienic instruction, and our far advanced cases for the protection of their family and friends?

Many of our ill patients are unable to pay for satisfactory laboratory tests and the laboratory can not give adequate service unless sufficient funds are appropriated to employ helpers and to enlarge its scope of services.

When the physicians of the state realized that hookworm was so prevalent and so readily treated when diagnosed, and that a definite diagnosis could be made only in a laboratory, Dr. Ennion G. Williams contacted the local physicians to ask them to see their representatives in the Senate and House of Delegates to ask them for an appropriation for the Health Department. This many of us did, so effectively that the Legislature appropriated several times as much as Dr. Williams expected to get or even asked for.

If our physicians would do the same this year our sanatoriums and laboratory would again advance and become modern institutions.

B. B. BAGBY, M.D.

Apropos to the work done by Dr. Bagby in the fight on hookworm, while with the State Department of Health, is the following letter from Dr. S. Peachy Latane to his sister, wife of Judge C. B. Jones of King and Queen County (home of Dr. Bagby).

Charlottesville, Va.
October 10, 1906.

MY DEAR JULIA:

I have been up here attending the meeting of the State Medical Society. I have an hour or so to wait before my train tonight, and I must write you to tell you how Little Bathurst Bagby made the hit of the meeting.

You may have seen recent reports of the Government about the tropical anemia found in our Colonial possessions—chiefly in Puerto Rico. This anemia being due to an animal parasite—the hookworm—which gains entrance to the body through dew itch or ground itch in barefoot people. Well, to make a long story short, while some of us have suspected that many of the so-called chronic malarias of the extreme southern states are nothing more nor less than cases of hookworm infection, Bathurst Bagby has proved that we have it right here in Virginia. He worked his suspected cases up well, sent specimens to the Government laboratories in Washington, D. C., for confirmation, and prepared a paper on the subject. In addition, he had the enterprise to bring three cases all the way up here with him.

I saw him up here and found what he had; got every body I knew to come over and see his cases and worked up as much interest and anticipation over his paper as I could before it was read. Finally when he read it and showed his cases, the Society went wild. The members crowded up on the platform and gave him a regular ovation. He made the hit of the meeting.

Today when they came to elect officers, it occurred to me that he ought to have some recognition and I had him nominated as one of the vice-presidents. I had an older member nominate him and I seconded it. I thought that he would possibly be run in a third vice-president, simply as a matter of courtesy and compliment. Don't you know that before they knew it he was elected first vice-president!! Dr. Paul B. Barringer of the University of Virginia is president and Dr. B. B. Bagby, of King and Queen is first vice-president. Isn't that remarkable?

The truth of the matter is that the little chap looked so young and delicate and so nervy withal, the people voted for him without knowing what they were about. I am truly delighted—though how

he would hold down the job in the absence of the President I don't see!!

He has been asked to stop in Richomnd and give his lecture and show his cases before the Medical College of Virginia. This is a great send off for him.

I thought you would be interested to know of it all.

Now all the little "dirt eaters" can be diagnosed and cured!

I have had a very pleasant visit here. I have been staying with John Staige Davis and have seen a good many old friends and acquaintances.

(signed) S. P. LATANE

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President ..... MRS. J. L. DECORMIS, Accomac
President-Elect ..... MRS. R. M. REYNOLDS, Norfolk
Recording Secretary ..... MRS. M. H. HARRIS, West Point
Corresponding Secretary MRS. HOLLAND TROWER, Eastville
Treasurer ..... MRS. REUBEN SIMMS, Richmond
Parliamentarian ..... MRS. E. LATANE FLANAGAN, Richmond
Historian ..... MRS. H. A. LATANE, Alexandria

Report of President.

Today the Woman's Auxiliary to the Medical Society of Virginia begins a new year, a year of hope and anticipated accomplishments.

To me you have given the responsibility and honor of being your new president. This responsibility I accept with a deep feeling of humility with the hope that through Him who doeth all things well I may be given physical strength and wisdom to serve you faithfully and well.

Here I would like to pay tribute to my predecessors who have been an inspiration to all of us and who have so ably guided the auxiliary through the past years.

Our purpose to serve as an auxiliary to the medical profession is accomplished through the activities of the officers and all the committees. Upon each auxiliary member rests the responsibility of furthur extending these activities. It is our desire to include all eligible women in our membership. In joining the medical auxiliary one does not add so many duties to an already crowded life, but receives guidance in a privilege and responsibility that we as doctors' wives already have.

The Bulletin, our national auxiliary publication, gives official and timely information, and is helpful in formulating plans and activities. Our national president has urged that we increase the circulation this year. It is edited for us at great time and expense, so let us show our appreciation by being subscribers.

Hygeia, published by the American Medical Association and edited by Dr. Fishbein, is filled with authentic information on health problems. The articles are written in terms understandable to the layman. Shall our goal be "*Hygeia* in every high school in Virginia"? If we subscribe to and read *Hygeia* and *The Bulletin* we will become better informed and more interested in the work of the Auxiliary and the advancement of health and health education.

It is vitally important that we as doctors' wives be well informed in order that we may take an important part in discussions and actions on health problems. However all activities with respect to health defense must be approved by the state and county advisory council.

Public Relations is a term that we hear used so much these days, and it has become a very important factor in our auxiliary work. One of the doctors at the Chicago Conference in December said that public relations was a complicated way of saying making friends. To make friends I think a sense of humor is essential along with warmth, tolerance and an easy approach to people. Our handbook tells us we must consistently and constantly promote such educational activities as will bring about better understanding between the medical profession and the public with respect to their common problems.

We are urged to help in the recruitment of nurses as there is a definite and alarming shortage of nurses in the nations' hospitals. Four hundred eighty five thousand six hundred graduate nurses will be needed in the coming years, some one hundred forty thousand less than the estimated probable supply.

Your president heartily recommends the philanthropic work of the past: the Leigh-Hodges-Wright Memorial bed fund, the Jane Todd Crawford Memo-

rial fund, Cancer Control and last, but very important, Child Health and Welfare. If the world moves forward on the feet of little children, then to us is given the task of helping to make a healthier, better world. As I see it, our calling is a glorious blessing but it is also a tremendous responsibility. Let us be diligent with the opportunities placed in our hands for fulfillment.

MABEL LEWIS DECORMIS
(MRS. J. L.)

New Officers of State Auxiliary.

At the 25th annual meeting of the Auxiliary to the Medical Society of Virginia in Roanoke, October 14, Mrs. J. L. DeCormis of Accomac succeeded to the presidency, and Mrs. R. M. Reynolds of Norfolk was named president-elect. Other officers elected at this time were: Vice-presidents, Mrs. Andrew G. Shetter, Richmond; Mrs. O. Anderson Engh, Alexandria, and Mrs. Herbert C. Jones, Petersburg; recording secretary, Mrs. M. H. Harris, West Point; corresponding secretary, Mrs. Holland Trower, Eastville; treasurer, Mrs. Reuben F. Simms, Richmond; parliamentarian, Mrs. E. Latane Flanagan; and historian, Mrs. H. A. Latane, Alexandria. The directors will be Mrs. J. E. Hamner, Petersburg, Mrs. William Lett Harris, Norfolk, and Mrs. P. M. Chichester, Richmond.

The Annual Report of the retiring president, Mrs. J. E. Hamner, Petersburg, will appear with the minutes of the Medical Society of Virginia in December.

Richmond

New officers of the Auxiliary to the Richmond Academy of Medicine, installed at the September meeting, are: President, Mrs. Luther Brawner; president-elect, Mrs. George Vaughan; vice-president, Mrs. Thomas Wheeldon; treasurer, Mrs. Edward Ray; corresponding secretary, Mrs. Benjamin Sheppard; recording secretary, Mrs. Gilman Tyler; historian, Mrs. Edwin Bryce; and parliamentarian, Mrs. E. Latane Flanagan. The following are chairmen of standing committees: social, Mrs. J. H. Scherer; membership, Mrs. J. F. Blades; publicity, Dr. Matilda Chalkley; public relations, Mrs. P. E. Schools; personal relations, Mrs. R. F. Simms; and year book, Mrs. W. A. Young.

BOOK ANNOUNCEMENTS

Physician's Handbook. By JOHN WARKENTIN, Ph.D., M.D., and JACK D. LANGE, M.S., M.D. Fourth Edition. University Medical Publishers, Chicago, Illinois. 1946. 282 pages, Cloth. Price $1.50.

Hospital Care in the United States. A study of the Function of the General Hospital, Its Role in the Care of All Types of Illness, and the Conduct of Activities Related to Patient Service, with Recommendations for Its Extension and Integration for More Adequate Care of the American Public. Commission on Hospital Care. New York, The Commonwealth Fund, 1947. xxiv-631 pages. Cloth. Price $4.50.

Advances in Pediatrics. Volume II. Editorial Board: S. Z. Levine, Cornell University Medical College, New York; Allen M. Butler, Harvard Medical School, Boston; L. Emmett Holt, Jr., New York University, New York; and A. Ashley Weech, University of Cincinnati, Cincinnati. Interscience Publishers, Inc., New York, 1947. x-409 pages. Illustrated. Cloth. Price $6.75.

The Practical Nurse. By DOROTHY DEMING, R.N., Consultant in Public Health Nursing, Merit System Unit, American Public Health Association; etc. New York, The Commonwealth Fund, 1947. viii-370 pages. Cloth. Price $3.00.

A History of the American Medical Association 1847 to 1947. By MORRIS FISHBEIN M.D. with the Biographies of the Presidents of the Association by Walter L. Bierring M.D. And with Histories of the Publications, Councils, Bureaus and Other Official Bodies. Philadelphia & London, W. B. Saunders Company 1947. xvi, 1226 pages. Illustrated. 24.4 cm. Price $10.00.

This is an encyclopedic work and consequently lacks uniformity of literary merit. Unfortunately it begins with an account of Nathan Smith Davis, M.D., A.M., LL.D. by Nathan Smith Davis III, M.D. a conglomeration of family troubles and the efforts of "Papa Davis" to keep the A. M. A. on its proper course. "Dr. Davis was known to hundreds who had only seen him walking back and forth regularly." Thousands who will read this biography will get no better acquainted with him. He must have been a man worth really knowing. One gets the impression that Nathan Smith Davis almost singlehandedly founded the A. M. A., started the Journal and established the Judicial Council. Succeeding pages of the History dispel this impression somewhat.

The play-by-play development of the A. M. A. in the form of accounts of the annual meetings appeared serially in the Journal. This reviewer enjoyed reading them as they appeared and is glad to have them in a convenient form for reference.

As Nathan Smith Davis' influence waned with age, a "dictator" in the person of George H. Simmons, took charge. Dr. Simmons was a great organizer but in his fight against patent medicine and quackery he made many enemies who did not hesitate to circulate scandalous stories about him. Dr. Fishbein has treated this chapter sympathetically and removed much of the mystery that was attached to his memory. The chapter on Libel Suits of the American Medical Association makes interesting reading. Dr. Bierring's biographies of the Presidents of the A. M. A. are quite attractive. Each sketch is accompanied by a portrait and some are quite good. The one of Dr. Thayer is terrible. Dr. Thayer's wonderful personality which you felt as soon as you came in sight of him, did not register on the photographic film, but it would seem that a better portrait of him could be found than the one that was selected.

The A. M. A. was founded primarily to improve medical education. Dr. Bierring tells us that the principal theme in every presidential address throughout this hundred years has been some phase of medical education. However the Association has had other interests and these are described by those who know most about them. The library was stored for years in the garret of the Smithsonian Institute until in 1895 it was given to the Newberry Library which in turn gave it to the John Crerar Library in 1907. Four years later Dr. Simmons started a working library in the A. M. A. headquarters building with a trained librarian, Miss Helen Hutchinson, who not only established loan collections but took over the indexing of the associations Journals. This latter activity grew into Quarterly Cumulative Index to Current Medical Literature and finally the Quarterly Cumulative Index Medicus. There are chapters on the various councils and Bureaus of the Association and one on its Publications. Each of the 132,224 members of the A. M. A. should have this handbook so as to realize what a wonderful association he belongs to. The A. M. A. has always been a fighting organization. At first there was its fight against proprietary medical schools and then its fight against proprietary medicines and quacks and now its fight against politically controlled medicine. These fights created powerful enemies that have sometimes undermined the faith of the doctors themselves. The first two "fights" were primarily for the benefit of the people. The last is for the benefit of the people as well as medicine itself. Every friend of medicine should read this book in order to gain a background of facts to aid him in the present crisis and in shaping the course of organized medicine in the future.

M. P. R.

Medicine in the Changing Order. Report of the New York Academy of Medicine Committee on Medicine and the Changing Order. New York, The Commonwealth Fund. 1947. xviii-240 pages. Cloth. Price $2.00.

This report represents a four year study conducted by 33 outstanding physicians and 17 representatives of allied professions and lay persons. Their object was to find out how economic and social conditions and changes are affecting health and medical practice in this country and what must be considered in planning for the future.

Enough of the past is given to understand how certain present conditions came about. In addition to medical practice this study covers medical education, hospital facilities, dental care, nursing service, public health service and medical research.

The fallacy of thinking that the problem of medical care is that of the cost is corrected by pointing out that there are many problems involving differences in population density, social and educational conditions as well as economic factors.

Compulsory health insurance is not approved at the present time, nor is "any other form of prepaid, full-coverage insurance to be applied as suitable for all sections of the country at the present time." Medical services paid by an insurance fund tempts the patient to demand more attention than he requires, and tempts the practitioner to add to his income by rendering unnecessary service.

The present system of state board licensure is believed to keep the medical curriculum rigid and inhibit progressive changes.

This report appears objective and is a valuable presentation of information. It is information that medical and lay people both need as background for considering medical and health problems in their own communities.

RAYMOND KIMBROUGH.

EDITORIALS

Our New President

THE Medical Society of Virginia is indeed fortunate in its choice of a president for the coming year, a year which will be most important in the history of our Society.

Dr. Guy R. Fisher graduated from the Medical College of Virginia in 1912 and served his internship at St. Elizabeth's Hospital in Richmond. He then located in New Hope, Virginia, his home town, where he engaged in general practice until 1919 when he went to New York and specialized in diseases of the Eye, Ear, Nose and Throat. Returning from New York, he began the practice of his specialty in Staunton in 1922 and has had a most successful practice there since that time. He is a diplomate



GUY ROTHWELL FISHER,
President, Medical Society of Virginia

of the American Board of Otolaryngology and his basic training in general practice has given him an excellent perspective for his specialty.

Dr. Fisher has held many high honors both in medical and lay circles. He is a past president of the Augusta County Medical Association, the Medical Society of the Valley of Virginia, and the Virginia Society of Ophthalmology and Otolaryngology. For many years he has been a regular attendant at the sessions of the Medical Society of Virginia and has done excellent work on many of its important committees.

In addition to his Medical Society activities he has been one of the leading Masons of Virginia and is Past Illustrious Potentate of Acca Temple. He has served as

president of the Staunton Kiwanis Club, as a delegate to a national political party convention, and is now National President of the Circus Saints and Sinners of America, Inc. He has given freely of his time and has been in great demand to address various civic, religious, and educational groups, and has been most public spirited in his active support of all worthwhile charities.

These honors and others too numerous to mention are a testimonial to his dynamic character and leadership, but what endears him most to the whole medical society is his humor, kindliness, and warmth of personality. He probably knows intimately more members of our Society than any other doctor in the State and he has the whole-hearted support of the medical profession in assuming his office as president.

In honoring him our Society has honored itself.

A. F. R.

The Annual Meeting

THE one hundredth meeting of the Medical Society of Virginia is now a pleasant memory. From almost every angle it was a great success. From the standpoint of attendance it was the biggest meeting the Society has ever had. Five hundred and eighty-four doctors registered. The ladies, exhibitors and visitors brought the number to some eight hundred. There were breakfast meetings, luncheon meetings, and dinner meetings, a birthday party, a cocktail party, a banquet, and a dance. The social side was perhaps a little too elaborate, but this can be forgiven on account of the commemorative character of the meeting. A society does not often have an hundredth meeting. That brings up the only serious criticism of the meeting. The program had been arranged with the idea of its clicking with time-table precision. However, the scientific sessions were late in starting, and in order to have all the papers, the general discussion was eliminated. This, we believe, is unfortunate, as frequently the discussion proves to be the most important part of the session.

We were particularly fortunate in our guests, Dr. W. Halsey Barker of Baltimore, Dr. Frederick A. Coller of Ann Arbor, Professor Richard Harrison Shyrock of Philadelphia, and Frank E. Smith of Chicago. Their contributions in medicine, surgery, history of medicine and administration were attractively presented and the guests themselves were delightful additions to the sociability of the occasion.

The service and accommodations of the hotel were all that could be wished for in spite of the size of the gathering. Our thanks go to the Hotel Roanoke for the way it took care of us. Last, but not least, the local committee of arrangements deserve the highest praise. Frank Farmer, George Hurt, Charles H. Peterson, David S. Garner, W. W. S. Butler and Mrs. T. Allen Kirk, put on a performance like actors in a good show where the acting is not like acting. All together the session will go down in history as a red letter meeting.

Why Not the Red Cross?

MILLIONS in Europe face hunger and cold. America must do her best for their rescue. We are told that the efforts of our government have not been too successful. Europe is losing faith in the United States, not that that matters so much. The average Frenchman has no idea that we have been sending his country billions of dollars in relief goods. All he hears is that we waste enough food to feed starving Europe. Some even think that what we have been sending comes from the com-

munists. The average Briton thinks our last loan iniquitous. He looks on us as a bunch of Yankee Shylocks. The term loan is unfortunate and worse than meaningless. It provokes acrimonious discussion of terms and leads to no practical results. International loans so far as the United States is concerned are one-way affairs, except when little Finland is involved. Why not be realistic and call it relief? It should hurt no one's feelings to accept relief under the circumstances, for no earthquake, tidal wave nor hurricane has produced so much material and spiritual damage as World War II. The American Red Cross has an organization trained to handle such catastrophes. Why not turn the situation in Western Europe over to it? It works quickly and efficiently and has no political ax to grind. If it took charge the peoples of Western Europe would know that relief were coming from the people of America, and the people of America would have confidence that their funds would be well spent.

The Master Word

RADIO commentators tell us that the French work five hours a day, four days a week, and that the British do very little more. With production per hour no greater that it is, no nation can support itself by working only 20 hours per week. It just cannot be done. If it made these people any happier to rest after their strenuous war experiences, there might be some excuse for this program, but such is not the case. In 1903, Osler, one of the great physicians of all time, spoke of *work* as the master word of medicine. Among its many attributes, he said that it was "True balm to hurt minds, in its presence the heart of the sorrowful is lightened and consoled." Western Europe needs a great political physician.

SOCIETIES

The Alexandria Medical Society

Sponsored a public meeting on the evening of September 25th at the George Washington High School Auditorium. The speaker was Dr. William T. Sanger, President of the Medical College of Virginia. His topic was "Health and Medical Care—a Local Responsibility". Representatives of the local government, service clubs, social agencies, health agencies, and church groups attended.

Since this is a problem concerning every citizen, the Medical Society was anxious that all interested citizens attend. The address was informative, direct, sincere and was received with keen interest as could be judged from the questions submitted to Dr. Sanger following his address.

GEORGE SPECK, *Secretary.*

Arlington County Medical Society.

The first meeting of the Fall-Winter term of this Society was held on September 18 at the Washington Golf and Country Club of Arlington. A very large attendance was present. The guest of the evening was Mr. Henry S. Johnson of the Medical Service and Public Relations of the State Society. Also present was Dr. Joseph S. Lawrence, the representative of the A.M.A., whose offices are in Washington, D. C. Members of the Legislature, Mr. M. McGruder and Mr. G. Damm, were also present.

Mr. Johnson gave a most interesting talk on the duties of his office, and asked the members to consult with him on any problem that has to do with relationship between the doctor and the lay public.

At the meeting on October 16 at the Washington Golf and Country Club, the Society had on its scientific program a paper and interesting slides by Dr. John Alexander of Arlington on Plastic Surgery as practiced in a general hospital. He brought out the newer methods developed since the last war and the excellent results achieved.

Hon. Charles Fenwick, candidate for the State Senate of Virginia, also gave an interesting talk on the Council for Medical Care and Health for the State of Virginia, and asked the backing of the Society in carrying out the State Health Program.

Several active and associate members have recently been admitted to the Society.

LEO SOLET, *Secretary.*

Patrick-Henry Medical Society.

The regular quarterly meeting of this Society was held in Martinsville on October 11th, with the president Dr. W. B. Dudley, presiding. Dr. Robert Crawford, Roanoke, presented a paper on "Thrombophlebitis". New officers elected are: President, Dr. W. Nash Thompson, Stuart; vice-president, Dr. L. A. Foudree, Stanleytown; and secretary-treasurer, Dr. J. H. Irby, Martinsville.

Roanoke Academy of Medicine.

At the meeting of the Academy on October the 6th, reports of committees were received and new officers for the coming year installed as follows: President, Dr. Charles M. Irvin; vice-presidents, Dr. John Gardner and Dr. Frank Helvestine; and secretary-treasurer, Dr. Ira Hurt. The Executive Committee re-elected for the coming year is composed of Dr. A. M. Groseclose, Dr. F. A. Farmer, Dr. F. E. Hamlin, Dr. C. H. Peterson and Dr. Charles Dorsey. The Judiciary Committee will be Dr. A. P. Jones, Dr. L. D. Keyser, Dr. Mortimer Williams, Dr. Charles A. Young, Sr., and Dr. William R. Whitman, Sr. Dr. Irvin then presented his presidential address.

The Southwestern Virginia Medical Society

Held its semi-annual meeting at the Governor Tyler Hotel, Radford, October 2, under the presidency of Dr. Charles F. Graham of Wytheville. The following papers were presented:

Presentation of an Interesting Case of Multiple Sclerosis—Dr. Frank A. Strickler, Roanoke.

Physical Medicine in General Practice—Dr. W. E. Malin, Wytheville.

Some Unusual Benign Gastric Lesions, with Report of Cases—Dr. William L. Sibley, Roanoke.

At the business session which followed, Dr. D. D. Vance of Bristol, Va., was elected president; Dr. R. M. DeHart of Radford vice-president, and Dr. A. F. Giesen of Radford was re-elected secretary-treasurer, and Dr. Harry Hayter of Abingdon was elected to the executive committee for a term of three years. Several doctors were elected to membership in the Society.

After the business session, a movie on "Folic Acid" was shown which was followed by a Social Hour, the banquet, and later Drs. Robert McMillan and H. H. Bradshaw of the Bowman Gray School of Medicine, Winston-Salem, N. C., presented the medical and surgical phases of "Common Congenital Cardiac Anomalies and Their Surgical Treatment".

Dr. Graham, retiring president, made a few remarks in closing.

The next meeting will be held in the Spring (probably the first Thursday in May) at the General Shelby Hotel in Bristol, Va.

The Wise County Medical Society

Had a banquet meeting at Hotel Norton, the evening of September 30th. Twenty-three were present. Applications for membership were received from two doctors and approved by the Board of Censors. Dr. J. H. Hagy made a Memorial Address for Dr. C. B. Bowyer.

W. Va.-A. M. A.'s stand for full recognition of the General Practitioner was considered favorably.

The address of the evening was by Dr. C. H. Peterson, Roanoke, on *Malignancies.* It was illustrated with slides, discussed, and was fully appreciated by the membership. The matter of some Clinics throughout the State Medical Colleges was discussed.

N. H. SHORT, *President.*
T. J. TUDOR, *Secretary.*

Medical Association of the Valley of Virginia.

At the meeting of this Association held on September 25th, Dr. Charles M. Caravati, Richmond, read a paper on the Present Status of Peptic Ulcer. Dr. J. B. McKee, Winchester, is president of the Association and Dr. M. L. Dreyfuss, Clifton Forge, secretary.

Virginia Peninsula Academy of Medicine.

There were sixty-eight members present at the September meeting of the Academy which was addressed by Dr. J. Hamilton Scherer of Richmond on "Practical Aspects of the Rh Factor". Three new members were introduced. Present officers of the Academy are: Dr. Paul Hogg, Newport News,

president; Dr. Eldred S. Jones, Hampton, vice-president; and Dr. Chester D. Bradley, Newport News, secretary-treasurer.

On October 20, the Academy was addressed by Dr. Julian Johnson, Associate Professor of Surgery, University of Pennsylvania, his subject being "The Surgical Treatment of Carcinoma of the Lung". He was introduced by Dr. J. Will Tankard of Hilton Village upon whose invitation Dr. Johnson addressed the Academy. The paper was discussed by Dr. C. C. Smith of Norfolk. Dr. Paul Hogg of Newport News presided. Seventy physicians attended the dinner preceding the meeting and at least eighty were present for the address.

NEWS

The Roanoke Meeting

Is but a pleasant memory now—except, of course, for those who have the winding up job. There were five hundred and eighty-four doctors registered together with one hundred and seventy-one ladies and eighty-six technical exhibitors—a grand total of eight hundred and forty-one, which is the largest registration at any of the one hundred meetings of the Society.

The business meetings started on the morning of October 13th, and the scientific sessions opened that afternoon. There was an unusually good attendance at all of these sessions. At the general session on Monday evening, Dr. William L. Powell, President, of Roanoke, delivered his Presidential Address; Dr. Wyndham Blanton, Richmond, spoke on "1820—The Virginia Doctor and His Times"; and Dr. R. H. Shryock, Philadelphia, gave an address on "Progress of Medicine in America in the Past One Hundred Years". At the close of this meeting, the President asked everyone to turn around and see what had happened in the other end of the ballroom. There on the table was a huge three tiered birthday cake, with punch and smaller individual cakes with "100th Meeting" written on them. All of this was in honor of the 100th Meeting of the Society.

The usual scientific sessions and special society luncheons were held on Tuesday. Dr. W. Halsey Barker, Assistant Dean of Johns Hopkins University Medical School, delivered an address on "Gastro-Intestinal Symptoms Occurring in Disorders Located Outside of the Gastro-Intestinal Tract". Dr. Frederick A. Coller, University of Michigan, Ann Arbor, spoke that afternoon on "Peripheral Diseases and Newer Concepts of their Management".

At 6:30 on Tuesday evening, a cocktail party was given honoring Dr. and Mrs. Powell. This was followed by a banquet—complete with steak and all the trimmings. Mr. Edmund H. Harding, of Washington, North Carolina, was the after-dinner speaker. He is a humorist and based his talk on "The Porous Plaster and Its 126 Holes". Along with one joke right after the other, he brought in a lot of good psychology and proved to be most popular. A dance followed the banquet.

On Wednesday morning, the meeting was closed with an address by Mr. Frank E. Smith, Director Associated Medical Care Plans of the American Medical Association. His topic was "The Doctor Assumes a Moral Responsibility".

Dr. Guy R. Fisher, Staunton, succeeded to the presidency, and the following officers were elected: president-elect, Dr. M. P. Rucker, Richmond; vice-presidents, Drs. Frank Farmer, Roanoke; W. D. Kendig, Kenbridge; and P. W. Boyd, Winchester; and executive secretary-treasurer, Agnes V. Edwards, Richmond. Councilors from the odd numbered districts were named as follows: 1st. Dr. R. B. Bowles, Mathews; 3rd, Dr. Guy Horsley, Richmond; 5th, Dr. W. A. Porter, Hillsville; 7th, Dr. Richard Bell, Jr., Staunton; and 9th, Dr. James King, Radford. Those from the even numbered districts hold over for another year—2nd, Dr. C. L. Harrell, Norfolk; 4th, Dr. J. L. Hamner, Mannboro; 6th, Dr. W. R. Whitman, Roanoke; and 8th, Dr. J. E. Knight, Warrenton. Dr. H. B. Mulholland, Charlottesville, was re-elected delegate and Dr. Walter B. Martin, Norfolk, alternate to the American Medical Association for a term of two years, with Drs. J. M. Hutcheson and Carrington Williams, both of Richmond, holding over as delegate and alternate, respectively, for another year. An invitation was extended from the Richmond Academy of Medicine

to hold the 1948 meeting in Richmond. This was unanimously accepted.

The scientific and technical exhibits were unusually good this year and seemed to be very well attended. One which attracted a great deal of attention was the display of photographs of presidents of the society for the 100 meetings.

The Roanoke Academy of Medicine deserves a lot of credit for the success of this meeting and special honors should go to Dr. Frank Farmer, chairman of the committee of arrangements and the other members of his committee, Drs. George S. Hurt, Charles H. Peterson, David S. Garner, W. W. S. Butler, and Mrs. T. Allen Kirk.

Special Society Meetings.

Several special societies held their annual meetings at the time of the State meeting. The following officers were elected:

VIRGINIA RADIOLOGICAL SOCIETY

President, Dr. E. Latane Flanagan, Richmond; vice-president, Dr. C. H. Peterson, Roanoke; and secretary-treasurer, Dr. Philip B. Parsons, Norfolk.

VIRGINIA ORTHOPEDIC SOCIETY

President, Dr. James T. Tucker, Richmond; vice-president, Dr. George A. Duncan, Norfolk; and secretary-treasurer, Dr. H. H. Wescott, Roanoke.

VIRGINIA SOCIETY OF PATHOLOGY AND LABORATORY MEDICINE

President, Dr. L. J. Motyca, Norfolk; vice-president, Dr. A. F. Strauss, Norfolk; and secretary-treasurer, Dr. M. L. Dreyfuss, Clifton Forge.

VIRGINIA UROLOGICAL SOCIETY

President, Dr. Charles Nelson, Richmond; vice-president, Dr. Herbert Jones, Petersburg; and secretary-treasurer, Dr. W. W. Koontz, Lynchburg.

VIRGINIA PEDIATRIC SOCIETY

President, Dr. Thomas A. Gibson, Winchester; vice-president, Dr. Maurice Fliess, Clifton Forge; and secretary-treasurer, Dr. E. B. Neale, Roanoke.

VIRGINIA OBSTETRICAL AND GYNECOLOGICAL SOCIETY

President, Dr. John O. Boyd, Roanoke; president-elect, Dr. Walter McMann, Danville; and secretary-treasurer, Dr. W. D. Suggs, Richmond.

VIRGINIA SECTION, AMERICAN COLLEGE OF PHYSICIANS

Chairman, Dr. Staige D. Blackford, Charlottesville; and secretary-treasurer, Dr. J. F. Waddill, Norfolk.

Alumni Meetings.

MEDICAL COLLEGE OF VIRGINIA

The Alumni Association of the Medical College of Virginia held a dinner meeting at Hotel Roanoke on October 13, the first evening of the meeting of the State Society. This was attended by 274, including alumni and guests. Dr. Donald S. Daniel, Richmond, first vice-president, presided. Dr. H. U. Stephenson M'95 of Richmond was the oldest alumnus present.

Dr. W. R. Payne, Newport News, chairman of the Memorial Alumni Building Committee, stated that the architect had been authorized to proceed with the plans and specification for remodeling the Maury Home at 1105 East Clay Street, Richmond, and it is hoped the Alumni Office may be moved to its new building by commencement in June 1948.

UNIVERSITY OF VIRGINIA

At the meeting of the State Society in Roanoke, alumni of the Medical Department, University of Virginia, decided to have a gathering. This year it was in the form of a breakfast at which fifty-eight were present. This year's president is Dr. Allen Barker, Roanoke, and secretary, Dr. C. T. Burton, also of Roanoke. It was decided to make these annual affairs, though not necessarily breakfast meetings.

Personnel Notes, State Department of Health.

Dr. Ella T. Robeson has been appointed Acting Health Officer of Elizabeth City-Warwick Health District, effective September 16 to replace Dr. T. F. McGough.

Dr. W. H. Michael has been appointed Health Officer of the Isle of Wight-Nansemond-Suffolk-Southampton Health District, effective September 22 to replace Dr. H. D. Crow.

Dr. G. A. Nevitt, Director of the Division of Mouth Hygiene of the State Health Department, was elected chairman of the Dental Health Section of the American Public Health Association at its meeting in Atlantic City on October 5-10.

Invitation to Postgraduate Teaching Sessions at University of Virginia.

A series of exercises in the medical sciences is being presented to the house officers of the University of Virginia Hospital at meetings held each Monday evening from 7:30 to 9:30 P. M. Any member of the Medical Society of Virginia who might wish to attend any of these exercises is cordially invited to do so. Information concerning program detail may be obtained from Dr. W. Roy Mason, Jr., University of Virginia Hospital, Charlottesville.

Your Directory Information Card.

Preparations are now being made to publish the new, Eighteenth Edition of the *American Medical Directory!* The last edition of the Directory was issued late in 1942. Since that time, it has been impossible to publish a new edition because of wartime restrictions and the shortage of paper and labor.

About November 15, a directory card will be mailed to every physician in the United States, its dependencies, and Canada, requesting information to be used in compiling the new Directory. Physicians receiving an information card should fill it out and return it promptly whether or not any change has occurred in any of the points on which information is requested. It is urged that those physicians also fill out the right half of the card, which information will be used exclusively for statistical purposes. Even if a physician has sent in similar information recently, mail the card promptly to insure the accurate listing of his name and address. There is no charge for publishing the data nor are physicians obligated in any way.

The Directory is one of the most important contributions of the American Medical Association to the work of the medical profession in the United States. In it, as in no other published directory, one may find dependable data concerning physicians, hospitals, medical organizations and activities. It provides full information on medical schools, specialization in the fields of medical practice, memberships in special medical societies, tabulation of medical journals and libraries, and, indeed, practically every important fact concerning the medical profession in which anyone might possibly be interested.

Therefore, should any physician fail to receive one of these Directory Information cards by December 1, he should write at once to the Directory Department requesting a duplicate card be mailed.

News from Medical College of Virginia.

Of the 809 students enrolling in the Medical College of Virginia, 314 were registered in the School of Medicine for the current session according to Dean Harvey B. Haag. There were 77 to enroll in the second year class including 51 veterans; 71 in the third year class including 40 veterans; and 81 in the fourth year class including 36 veterans.

Tuition fees for Virginia veterans at the Medical College of Virginia which had been raised for the current session were reduced recently to their former rate by the college Board of Visitors.

The college raised the rates for Virginia veterans this year to correspond with those charged out-of-state students which meant that fees for Virginia ex-service men were increased from $400 to $500 in the school of medicine, $375 to $475 in the school of dentistry and $300 to $400 in the school of pharmacy. The maximum tuition would still have been absorbed by the Federal Government under the GI Bill of Rights but for the medical students, and some others, the fees, books, and equipment would have been extra which brought complaints from many of the veterans. The college, therefore, reverted the tuition rates for Virginia students to the original cost and voted to request the Virginia General Assembly to appropriate funds estimated at about $34,000 to meet the deficit created by this action.

Dr. Everett I. Evans, Associate Professor of Surgery at the Medical College, recently visited England, France, and the Scandinavian countries to discuss with European scientists various problems of current research. He returned the latter part of October.

Dr. Frank L. Apperly, Professor of Pathology at the Medical College of Virginia, was recently elected a Fellow of the College of American Pathologists.

Two members of the faculty of the Medical College of Virginia read papers at the Post-Graduate Cancer Clinic held in Roanoke recently. Dr. Randolph H. Hoge, Professor of Gynecology, read a paper on "Carcinoma of the Cervix" and Dr. A.

Stephens Graham, Associate Professor of Surgery, read one on "Carcinoma of the Rectum".

Three members of the faculty of the Medical College of Virginia, Richmond, read papers at a recent meeting of the American College of Surgeons in New York City. Dr. Peter N. Pastore, Professor of Otolaryngology and Rhinology presented a paper on "The Technique of Local Anesthesia in Otorhinolaryngology". Dr. Margaret DuBois, Associate Professor of Hospital Administration, discussed "The Proper Approach to Maintaining Adequate Medical Records", and Dr. Everett I. Evans, Associate Professor of Surgery, presented the topic "Proper Employment of Oral Feeding in the Surgical Patient".

Dr. Reno R. Porter, Associate in Medicine at the Medical College of Virginia, recently gave a lecture to the Pitt County Medical Society at Greenville, North Carolina, on the subject, "Diagnosis and Treatment of Rheumatic Fever". Dr. Porter also read a paper at the Medical Society of Virginia meeting in Roanoke October 15 on "The Practical Application of Unipolar Leads".

Urology Award.

The American Urological Association offers an annual award of $1,000.00 (first prize of $500.00, second prize $300.00 and third prize $200.00) for essays on the result of some clinical or laboratory research in Urology. Competition shall be limited to urologists who have been in such specific practice for not more than five years and to residents in urology in recognized hospitals.

The first prize essay will appear on the program of the forthcoming meeting of the American Urological Association, to be held at the Hotel Statler, Boston, Massachusetts, May 17-20, 1948.

For full particulars write the Secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis, Tennessee. Essays must be in his hands before March 1, 1948.

New Associate Editor.

Dr. Morris Fishbein, editor of *The Journal of the American Medical Association,* has announced that Dr. Richard J. Plunkett has taken over his duties as associate editor of *The Journal.* Dr. Plunkett, who formerly was vice president and director of the Division of Health and Sanitation of the Institute of Inter-American Affairs in Washington, D. C., received his M.D. degree from Tufts Medical College in 1933 and his master's degree in public health from Harvard in 1939.

Stoneburner Lectureship.

A memorial lectureship created by friends of the late Captain Lewis Tilghman Stoneburner, III, of Richmond, has been accepted by the board of visitors of the Medical College of Virginia. Dr. Stoneburner was reported lost over the Mediterranean in October, 1943, while on a mission in connection with his duties as a staff member of the Forty-fifth General Hospital in North Africa. He was a graduate of the Medical College of Virginia in 1937. Dr. Benjamin W. Rawles, Jr., is chairman of the committee creating the memorial lectureship.

Dr. Riley Elected to Membership in Southeastern Surgical Congress.

Dr. C. L. Riley, Winchester, has received notice from the Executive Council of the Southeastern Surgical Congress of admission as a Senior Fellow in that organization. Installation exercises will be held at Hollywood, Florida at the time of the next meeting.

Virginia Section, American Academy of General Practice.

During the meeting of the Medical Society of Virginia in Roanoke, the general practitioners organized a section of the American Academy of General Practice. This Academy had been formed in Atlantic City during the meeting of the American Medical Association.

A breakfast meeting was held at 8:00 A.M. October 14th, at the Hotel Roanoke. The acting chairman was Dr. John Boyd, Jr., of Roanoke who presided until the election of the Vice-President, Dr. C. R. Titus, who then took over. At this meeting a constitution and by laws, modeled closely after that of the National Academy, was presented and accepted. The officers then elected in accordance with the constitution and by-laws, are:

President, Dr. W. L. Powell_____Roanoke
President Elect, Dr. J. L. Hamner_____Mannboro
Vice President, Dr. C. R. Titus_____Bedford
Secretary, Dr. J. O. Boyd, Jr._____Roanoke
Treasurer, Dr. W. R. Pretlow_____Warrenton

Delegates to the Congress of Delegates of the National Academy for the year 1948, Dr. C. P. Jones,

Jr., of Newport News, and for two years, through 1949, Dr. J. O. Boyd, Jr., of Roanoke.

The objectives and requirements for membership of this organization were stated in an article appearing in the September issue of the *Virginia Medical Monthly*. Application blanks may be secured from the Secretary, Dr. John O. Boyd, Jr., 820 S. Jefferson St., Roanoke, or from the member of the Board of Directors from the applicant's home district.

Board of Directors: *Term Expires 1950*—Drs. E. E. Haddock, Richmond; Frank Farmer, Roanoke; and Mary E. Johnston, Tazewell.

Term Expires 1949—Drs. Ira Hancock, Creeds; B. A. Hopkins, Stuart; J. C. Coulter, Charlottesville.

Term Expires 1948—Drs. C. P. Jones, Jr., Newport News; W. J. Ozlin, South Hill; Harold Miller, Woodstock.

Virginia Division, American Cancer Society.

At a meeting of the executive board held in Richmond on October 17th, Dr. I. A. Bigger, Richmond, was elected president; Dr. Guy Horsley, Richmond, vice-president; and Dr. George Cooper, Charlottesville, reelected medical and scientific director.

Dr. Julian L. Rawls, Norfolk, became the first Virginia physician to receive the J. Shelton Horsley Memorial Award of Merit in recognition of his outstanding contributions to the cause of cancer control.

Doctors who were named to the Board of Trustees are: Drs. R. P. Bell, Staunton; William Parker, Charlottesville; Russell Buxton, Newport News; L. C. Downing, Roanoke; Joseph Houck, Lynchburg; Alfred P. Jones, Roanoke; George McCall, Bristol; George Z. Williams, Richmond; James R. Cash, Charlottesville; J. M. Emmett, Clifton Forge; A. B. Gathright, Jr., Richmond; Guy Horsley, Richmond; Edwin P. Lehman, Charlottesville; Julian L. Rawls, Norfolk; and C. L. Harshbarger, Norton.

Superintendent of DeJarnette State Sanatorium.

Dr. C. Earle Johnson, Jr., of Alabama, has been named superintendent of DeJarnette State Sanatorium succeeding the late Dr. Hugh Page Newbill. He retired from the Navy in August with the rank of commander and since that time has been associated with hospitals in Alabama.

New Bureaus in State Department of Health.

Dr. William F. Wagner, recently director of tuberculosis control for San Francisco, has been appointed director of a New Bureau of Tuberculosis Control in the State Department of Health. The work of this Bureau has been handled by three separate units: the Bureau of Crippled Children, the Tuberculosis Outpatient Services, and the Bureau of Industrial Hygiene and the Sanatoria. All of the activities relating to tuberculosis control will now be under one department.

Dr. Louise Galvin, department specialist in rheumatic fever control, has been named chief of a new Crippled Children's Bureau.

Married.

Dr. Roger Gregory Magruder, Charlottesville, and Miss Eleanor Ruth Moseley, Quanah, Texas, October 18th. He is a graduate in medicine from the University of Virginia and was a flight surgeon during World War II.

Dr. Walter Frank Daughtrey, Jr., Holland, and Miss Virginia Brooks Manry, Courtland, September 27th. He is a graduate of the Medical College of Virginia, class of 1943.

Mr. Hugh Ashley Tuggle and Dr. Mary Stuart Wilson, both of Keysville, September 17th. Mrs. Tuggle received her medical degree from the University of Maryland in 1944.

Dr. Tompkins' Portrait Unveiled.

A portrait of the late Dr. J. McCaw Tompkins, former president of the Johnston-Willis Hospital, Richmond, was unveiled at the hospital on October 7th. The portrait is the work of David Silvette.

Dr. Richardson Resigns.

Dr. Herman M. Richardson, Midlothian, a member of the Chesterfield County School Board for the past ten years, has resigned due to pressing private business matters.

American College of Surgeons.

At the thirty-third Convocation of the College, held in New York on September 12th, the following initiates from Virginia were accepted into fellowship: Dr. John P. Eastham, Richmond; Dr. Barnes Gillespie, Hilton Village; Dr. Charle H. Henderson, Norton; Dr. Julien H. Meyer, Roanoke; Dr. Robert L. Payne, Jr., Norfolk; Dr. William B. Wiley, U.S.P.H.S., Norfolk; Captain Gerard B.

Creagh, M.C., U.S.N, Norfolk; Captain R. Harwood Fogel, M.C., U.S.N., Portsmouth; and Commander John S. Thiemeyer, Jr., M.C., U.S.N., Norfolk.

The Seaboard Medical Association of the Carolinas and Virginia

Will hold its annual meeting at the Cavalier, Virginia Beach, December 2, 3 and 4, at which time there will be an interesting scientific and social program. Dr. O. R. Yates of Suffolk is president, and Dr. C. P. Jones, Sr., of Newport News secretary.

New York Surgeon,

Aged 62, very active and perfect health, desires southern residence. Retiring January 1 as Director of Surgery in 1,000-bed hospital and as Professor of Clinical Surgery. Seeks hospital, Community, industry, railroad or group association. State proposition, contact Dr. T. J. Hughes, Shenandoah Life Building, Roanoke 10, Va. *(adv.)*

OBITUARIES

Dr. George Humphrey Thomas,

Staunton, died September 5th. He was born in Loudoun County in 1867 and graduated from the New York University Medical College in 1891. Dr. Thomas had for a number of years been a member of the staff of Western State Hospital, and had been a member of the Medical Society of Virginia since 1918. His wife and five children survive him.

Resolutions on Dr. Bowyer.

The following resolutions were passed by the Wise County Medical Society at its meeting in Norton on September 30:

Dr. Claude Bernard Bowyer passed away unexpectedly in the afternoon of July 29, 1947. Forty-one years ago he came from Richmond and joined our group. He advanced rapidly and within five years, headed the staff which went to eight industrial doctors. Industrial medicine was his chief work, but he took time to help build this fine Society that we have, the Clinch Valley Medical Society, and was a power, and finally President of the Medical Society of Virginia. During these years he became an outstanding farmer and cattle raiser, a leading banker, a sportsman, and he was without a peer as a raconteur. We have profited by his business and professional advice and guidance, enjoyed his comradeship, and laughed at his stories.

He read good books, played, worked hard, and enjoyed the most intimate friendship in the whole social gamut from the lowest to the highest. The mighty eagerly sought his company, accepted his advice, and he radiated sunshine and happiness to them and to all. We, the State Medical Society, and his professional and literary alma maters, accorded him top honors.

The last paragraph of his will, which disposed of a large estate, reads, "I desire to say that I have a firm belief in the existence of Almighty God, whose dispensations are always best, an abiding faith in the efficacy of the atoning blood of Jesus Christ, His only Son, and that through faith I am a partaker of His Redemption and by grace, I hope to attain eternal life."

THEREFORE BE IT RESOLVED, that in the death of Dr. Bowyer the people of Wise County and the medical profession have suffered an almost irreparable loss;

BE IT FURTHER RESOLVED, that a copy of these resolutions be spread on the minute books of the Wise County Medical Society, a copy sent to the VIRGINIA MEDICAL MONTHLY, and a copy to the Bowyer Family at Emory, Va.

J. H. HAGY
W. B. BARTON
T. J. TUDOR
Committee

Resolutions on Dr. W. T. Potter.

At the meeting of the Norfolk County Medical Society on October the 6th the following resolutions were adopted on the death of Dr. Potter:

The Norfolk County Medical Society records with sorrow the death of one of its members, Doctor William Thomas Potter. A graduate of the Medical College of Virginia in 1910, he entered the practice of medicine at Aurora, N. C., and removed to Norfolk in 1920. In 1926 a promising career was cut short by an accident that completely disabled him for twenty-one years. It is given to few men to rise above so serious an obstacle and by his greatness of spirit, impress himself so forcibly upon his fellows. His cheerfulness, patience and fortitude endeared him to us, and his courage in adversity was an inspiration to all that knew him.

BE IT RESOLVED, THEREFORE, that this expression of our appreciation of his life among us be spread upon the minutes of the Society and that a copy be given to his family, as a token of our regard.

(Signed) N. G. WILSON
N. F. RODMAN
C. L. HARRELL
WALTER B. MARTIN
Chairman.

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*R. H. Follis, D. Jackson, M. M. Eliot, and E. A. Park: Prevalence of rickets in children between two and fourteen years of age, Am. J. Dis. Child. 66:1-11, July 1943.

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MERRY CHRISTMAS!

December, 1947

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Virginia Medical Monthly

Vol. 74, No. 12
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RICHMOND, VA., DECEMBER, 1947

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MEDICAL PROGRESS DURING THE PAST CENTURY*

RICHARD H. SHRYOCK, PH.D.,
Professor of History, University of Pennsylvania,
Philadelphia, Pennsylvania.

We are often reminded that medicine has made more progress in the last fifty or sixty years than in all the preceding centuries. In preventive medicine, surgery, and therapy—the end-results of research that directly advance human welfare—this is certainly true. To make such an abstract statement meaningful, one has only to read case histories of the 1840's or even for as late as the '70's, wherein is revealed a type of practice that now seems bizarre, futile, and even dangerous. A so-called continued fever, which may have been typhoid, is treated by bleedings; a compound fracture indicates immediate amputation; an apparent case of appendicitis calls for purgatives, and then, if ("in spite of all that could be done") the patient becomes worse, morphine is "used as a last resort"! Read, for example, the dramatic accounts (given in Dr. Blanton's able *History*) of the care accorded wounded Confederate generals during the 1860's—care that presumably represented the best then available in the military services.

It is had to realize that all this was typical, not of some remote era, but of years within the lifetime of those still living! The revolution in medical science and practice which followed—apparently beginning about the 1880's—was a major transformation. How much more significant this was for all of us than were, for example, the ups and downs of Democrats and Republicans in national elections—to which latter story, by the way, historians give many times the space accorded to scientific progress. Some of our older physicians can actually recall the greater part of this medical revolution, and it is no mean thing to have participated in one of the great, sudden surges of human progress. We all know the main features of the story—the discovery of causal factors in infectious diseases; the implications of these findings for sanitation, for immunology, and for surgery; the impact of biochemistry through studies of endocrinology and nutrition; the remarkable transformation of professional institutions—of medical schools and hospitals—which responded to standards set by the new research; and then, finally, the achievements of recent years in chemotherapy. Truly, an old art and a most imperfect one has been metamorphosed over-night—as time goes—into a modern science.

Even the non-scientific public appreciates this. A century ago, American newspapers openly condemned the "ignorance" and "butchery" ascribed to physicians and surgeons; and the leaders of early state medical societies wrote melancholy papers on "the declining state of the medical profession". Today, one need only attend the "movies" to observe the popular appreciation of physicians and medical science; witness the adventures of the late-lamented "Dr. Kildare", or such pictures as "Pasteur" and "The Magic Bullet". Or consider the decline of the rival medical sects, which in the days of widely-patronized Thomsonian or homeopathic practice, really threatened the whole status of the regular profession. Only vestiges of these competing systems now remain, in such forms as osteopathy, chiropractice, and "Christian Science". Public criticism of the medical profession persists, indeed is more vocal now than it has been since 1880; but note that lay critics are no longer skeptical about medical science. Their only protest is that, as some believe, they cannot get enough of the medical care that science has made possible. Even the ignorant person can appreciate the specific help given him in illness; while the well-educated are

*Read by invitation at the 100th meeting of the Medical Society of Virginia in Roanoke, October 13-15, 1947.

conscious not only of the near-disappearance of many infectious diseases but also of the amazing net result; namely, that the average life expectancy of Americans at birth has about doubled within a century.

Just because these achievements are so remarkable, however, present generations need to be warned against complacency. I need not remind you that scientific problems still confront us—problems as sinister as they are complicated. The fact must be faced, that certain chronic and degenerative diseases seem to have increased almost in inverse ratio to the decline in communicable disorders. One can imagine a physician of fifty or perhaps only ten years hence marveling at our limitations in confronting, say, hypertension; even as we now wonder at the ignorance of 1850 in the presence of typhoid or of yellow fever. Yet we have at least this advantage today, that we know the methods of research which must be employed—controlled experiments, improved instruments of observation, statistical procedures and so on—which must be used in the advance against the still untaken bastions of disease. More than this, we know—or at least believe we know—the weakest points to attack; that is, we have some understanding of what questions to raise, of what approaches to follow.

Medical scientists of a century ago only partially comprehended the questions they had to ask of Nature, or, more specifically, of the human body and its environment. And they were only beginning to appreciate the methods which are now taken for granted. It may be assumed that they were just as intelligent as we, perhaps even a bit ahead of us in this respect. Why, then, was their progress apparently so slow prior to 1880? The answer is partly social rather than scientific in nature; for example, one could not really test the efficacy of a therapeutic procedure without clinical statistics and "controls"; these were not available until large modern hospitals were built, and the latter in turn had to await the growth of great cities after 1800. The explanation also lay partly with the rate of advance in other sciences. To use the same illustration, full use of clinical statistics depended on the development by mathematicians of the calculus of probabilities, which did not occur until about 1800. Or to cite a more obvious instance, medical bacteriology had its advent as early as 1650, but could make little headway until the achromatic microscope was evolved during the 1820's.

Although retarding factors of a social or technical nature were serious, the most potent factor in the long lag in medical progress before 1880 lay with medical men themselves. And this was simply the fact that they, in studying illness, had for centuries asked the wrong questions. They were always inquiring: how can we prevent disease or cure it? What was more natural: was that not what everyone wanted them to discover? Yet we can now see that no rational search for remedies could be made until the diseases themselves were first discovered. How find cause or cure for typhoid, when the doctor never knew whether he was dealing with what would now be termed typhoid, or typhus, or malaria, or other infections that cause fevers?

It was only when this concept of disease specificity gradually evolved in medical minds between 1650 and 1800, and when men attempted to distinguish systematically between one disease and another, that modern medicine loomed on the scientific horizon. Once the need for disease identification was realized, the question arose, what are the criteria for such identifications? The first and simplest was that of symptoms—which is almost all we have today in such a condition as the common cold. But symptom complexes were innumerable and confusing; hence, the doctor of 1847 talked as though different diseases were indicated by such symptomatic classifications as "intermittent fever," "continued fever," "jail fever," "putrid fever," "yellow fever," and so on. The second criterion discovered was that of pathologic lesions which, when correlated with symptoms, gave a far clearer picture of disease entities. Such a correlation, for example, broke down the old symptom picture of "inflammation of the chest" into the fairly well-defined concepts of "pneumonia," "pleurisy," "bronchitis," and so on.

This pathologic research was followed by the Italian Morgagni by 1750, and was pursued systematically by French and Austrian clinicians between 1800 and 1850. It was introduced into the United States by students returning from Paris after 1820; but little such work was done in this country prior to 1880—partly because of popular prejudices against dissection, partly because the practical Americans would not support research that led to no immediate prevention or cures. Gerhard,

of Philadelphia, showed by autopsies in 1837, the difference between typhoid and typhus; but who cared as long as he found no cure for either condition? On the other hand, Americans did excellent work when practical results were in view; witness their clinical research in the development of surgical anesthesia during the 1840's.

Yet to the early nineteenth-century pathologists, we owe the real advent of modern medicine. Toiling at difficult and unpleasant autopsies and correlating their findings with the ante mortem clinical data, they had worked out by 1850 the broad features of modern disease identification. Of course they strove to improve the exactitude of clinical observation as well as of dissections; hence the appearance of the stethoscope during the 1820's and gradually, thereafter, of all the other 'scopes now employed. To these men we owe modern medicine, rather than to the Pasteurs and Kochs of the 1880's—valuable as were the services of the latter. Pasteur and Koch reaped where the earlier pathologists had sown. For, be it repeated, no one could have sought the causes or cures of anthrax, or typhoid, or tuberculosis until those entities had been discovered and defined.

The pathologists worked without public acclaim, for they helped no patients in their generation. Theirs was the realm of pure science, and there is no better illustration of the value of pure science than what they achieved. Indeed, they even went to the extreme of nihilism; that is, they lost interest in therapy as such. (This was one reason the public lost faith in medical science by 1840, and turned to the cults which promised all things to the sick.) Today, it is hard to convince even physicians of what we owe to these pure scientists, to such leaders as Louis and Laennec in France, Bright in England, Rokitansky in Austria, and Gerhard in the United States. Nor can we dramatize them to the public today, as we do Pasteur or Ehrlich, since they worked only at the autopsy table. Not even Hollywood could make a movie thiller in which the main character was the cadaver!

Just how did disease identification lead to all the so-called "triumphs of modern medicine" that ensued after 1880? One practical result appeared even as early as the 1840's, namely, the emergence of new opportunities and techniques in surgery. We usually assume that surgical progress resulted from the discovery of anesthetics and later of antiseptic procedures. Actually, as Dr. Sigerist pointed out some years ago, it was the emphasis upon pathologic anatomy—upon the relation of structural lesions to specific diseases—that led to the new surgery. As long as pathology consisted only of theories about impure blood or nervous tensions, there was no place for surgery except for emergency measures. How could one operate for a disease caused by "impure blood," anymore than we can now operate for septicemia? But as soon as diseases were associated with specific parts, then the removal of the latter promised cures. And so surgery moved from the periphery to the center of medical practice.

But the major explanation of how pathology made possible all later progress in medicine has already been suggested. Once you knew just what typhoid fever was, then it was possible to seek its cause or cure. If a disease was specific, its cause was likely to be specific. For centuries before 1840 there had been two theories as to how communicable diseases spread: (1) by poisons in the surrounding atmosphere (noxious miasms), or (2) by living organisms (*contagium vivum*). After 1840, there were many efforts to find specific poisons in the air which could cause specific diseases. These proved fruitless. Meantime, there were also attempts to check the other theory by isolating specific organisms (animalculae) which could cause specific diseases. These efforts were rewarded after 1870, as we all know, by the discovery of pathogenic bacteria—an achievement also made possible by the microscope and by Koch's improvements in bacteriologic techniques.

Note that medical bacteriology not only soon led to antiseptic surgery, to a science of immunology, and eventually to an effective chemotherapy, but that it also advanced disease identification and therefore diagnosis to a third and most effective level. To the criteria of symptoms and of lesions, could now be added that of cause. Throat symptoms and even lesions may look like diphtheria, but a case is no longer diagnosed as such unless the specific organisms are present. How important it is to identify a disease by its etiology as well as by the other criteria, may be seen in the degree of control we have over a condition known by all three tests—such as diphtheria—as compared to one which is known only by symptoms and lesions

(as in nephritis) or only by symptoms alone (as in the cold).

When did American medicine join in this triumphant scientific procession? Until about 1890 it largely followed in the rear, taking over its science from France until about 1860, and from Germany thereafter. Basically, as noted, the lag in American research can be ascribed to the fact that we were a practically-minded people concerned largely with the end-results of research. This was not because the United States was "a new country," or because it lacked either the population or wealth to advance medical science had its people so desired. During the War Between the States, military surgeons amassed the greatest collection of pathologic data available anywhere in the world but did relatively little with it. Prestige in the American medical profession lay in successful practice, since this seemed practical and also led to income that accorded social standing. Research that had no bearing on cures, on the other hand, seemed impractical, brought no wealth, and so was tolerated rather than supported by either government or private philanthropists.

In my opinion, the American people have not changed in this regard: we still seek that which is practical and we still cultivate efficiency. Do not let us under-estimate these attitudes, by the way, for there is much to be said for them. The very Europeans or Latin-Americans who ridicule our so-called "materialism" are quite glad to take over our practical technology, or to seek the financial aid which is made possible only by our combination of commercialism and generosity. But the fact remains that our national attitudes did not encourage the support of pure research before 1890. How, then, explain the sudden appearance of first-class medical science in this country after that time?

If Americans did not change, two other factors did. First, the discoveries of Pasteur's day revealed for the first time a type of basic research that *did* lead almost immediately to practical results. Immunizing vaccines and serum therapy were very practical and Americans sought them avidly. Pasteur's work was barely under way before such Americans as Sternberg were making similar studies; within a few years certain of our fellow-countrymen were abreast or even ahead of European contemporaries. This can be seen in Theobald Smith's pioneer discovery of the insect vectors of certain infections. After 1900, American sanitary engineering—based now on bacteriology as well as on mathematics—became as good or better than that of any other land. And we all know of the amazing progress of our native surgery during the Mayo era. Today, even the most basic cancer studies seem to be based here on the conviction that, after all, such research will really prove the quickest way to secure useful results.

One other factor changed in this country, which also aided in placing American medical science in the van of world progress after 1914. This was simply the accumulation of great wealth, based on natural resources and on a superior technology. While some wealth was always necessary to support science, all the medical progress that has been noted rapidly made medical research—as well as medical practice—far more expensive than it had ever been before. The pathologist of 1850 needed as equipment only a table, washstand, a few chemicals and a surgical kit; while the clinician called only for some drugs, a lancet, and a stethoscope. Compare this with the elaborate and expensive equipment now required in medical laboratories or even in the wards. It was what the old astrologers would have called an "angelic conjunction," that just when medical science became ever more costly, American institutions became ever more wealthy. Of course, medical faculties always feel that their schools are short of funds; but compare their situation with that of many European institutions. The recent war has made this contrast more glaring. Next year, the medical school of Padua—one of the historic seats of early medical progress—will have just fifteen dollars available for the purchase or repair of microscopes. Ten or twenty students must use the same instrument.

Relatively, then, American medical science stands today in a position of unique advantage. It is our task, perhaps more than that of any other single nation, to carry the torch of medical discovery which has been handed on by great European predecessors. The realization of this situation should lead, not to national complacency, but to a determination to be worthy of this grave responsibility.

EIGHTEEN HUNDRED AND TWENTY
The Virginia Doctor and His Times.*

WYNDHAM B. BLANTON, M.D.,
Richmond, Virginia.

Mr. President, Ladies and Gentlemen:

Tonight, in celebration of a centennial, it is my pleasant task to talk about the Medical Society of Virginia and its origins. Although one hundred and twenty-seven years have elapsed since our society's founding, not until today have we held our one hundredth meeting.

I.

Let us imagine this is not October 13, 1947, but October 13, 1820, the year we were founded. It is Friday—Friday the thirteenth. What the state of the weather was, I do not know. The first records of weather in Richmond were kept by the R.F.&P. Railroad — but not until after 1872 — and the Weather Bureau was not established there until 1897. For the place is Richmond—and it is the day after the fair. The place might have been Roanoke, now the third largest city in our Commonwealth, had Roanoke been in existence; but I must remind you that it was 1884 before the name Roanoke was applied to this community, and that the antecedent name "BIG LICK" was not used until 1834. In 1820 the chief person living in this neighborhood was one Kemp Gaines, and he was not interested in founding a medical society.

One hundred and twenty-seven years ago, 90% of the nation's population lived in the country, only 10% in cities. Certainly Richmond was then not much of a city in terms of modern values. There 4,000 Negro slaves served 6,000 white masters and 1200 free negroes wondered what it was all about. Most of the houses were small and unpretentious. The more imposing were surrounded by numerous necessary outbuildings. Cobblestones were just coming into vogue as a cure for dusty, muddy streets. There was no railroad, but a steamboat made a journey to Norfolk luxurious and exciting. Other travel, when not on foot, was by horseback, chariot or stage.

The City Directory for 1819 listed twenty-eight physicians, approximately one for every 400 of the population, nearly twice as many per thousand as are now in the United States (1-760).

Here it should be stated that it was 1851 before the Medical Society of Virginia became in fact a state-wide organization, although it bore this name from the first, as the founders hoped to attract to its membership doctors from the state at large. This was, however, too much to expect at a time when, although Virginia had a population of over a million people and her western borders stretched to Pennsylvania, Ohio and Kentucky, there were no railroads and it took seventeen hours to get from Fredericksburg to Richmond.

II.

What was the world of our founders like on the thirteenth day of October, 1820? Of course the sun rose at 5:53 A.M. and set at 5:07 P. M., just as it did today. There were other similarities. Europe was prostrate from the Napoleonic wars. England had won the war, but not the peace. The trade of the world was in her grasp but she faced a staggering debt. Commerce and profiteering had brought great wealth to some but the masses were pitifully poor. It was a time of social unrest aggravated by unwise legislation. The nation was making the painful transition from an agrarian to an industrial economy while a powerful parliamentary block sought subsidies for the farmer who could not make a go of it.

For America it was a year of decision—the year of the Missouri Compromise. Then and there the issues of '61 to '65 were drawn and many Virginians were not unaware of the inevitable *dies irae* ahead. Remember that Jefferson, Marshall, Madison, Webster, Calhoun and Clay were still alive. Monroe was president of the United States; Thomas Mann Randolph, Governor of Virginia. James Barbour and James Pleasants were in the Senate, John Randolph of Roanoke was as vituperative as ever. Richmond's Mayor was a doctor.

Perhaps the average Virginia doctor was too busy with his profession to take in the political significance of what was transpiring. Perhaps he found it more relaxing to lend a half-attentive ear to his wife's enthusiasm for the New York weekly, *The Ladies' Literary Cabinet*, or for Scott's Ivanhoe, just off the press. It is true that only one-half the

*An Address delivered, by invitation, before the Medical Society of Virginia, at its annual meeting in Roanoke, October 13-15, 1947.

women of the period could read or write, but no doubt a doctor's wife, then as now, was an exceptional woman. So there was more than a fifty-fifty chance of her being able to tell him what was going on. Assuming that his was a literary family, it had other subjects for discussion, for Byron, Coleridge, Keats, Shelley and Wordsworth were busily packing beauty and truth—each into his own chosen literary vehicle.

Whittier, Holmes, Longfellow, Hawthorne, Poe and Emerson were still boys. Washington Irving was in Europe. William Cullen Bryant was only twenty-six years old, but he had already written *Thanatopsis* and *To a Water Fowl*. Obviously if the literary appetite of our doctor was to be satisfied he had to depend upon foreign, rather than domestic fare.

Two newspapers are now published in Richmond. On this day 1820, with a population one-seventeenth as large, the town offered no less than three dailies. If one is in search of a mirror of contemporary life there is no more rewarding place to seek it than in the advertisements that occupied so prominent a part of the newspaper of the early Nineteenth Century.

A glance at the *Richmond Enquirer*, the *Richmond Compiler* or the *Virginia Patriot* for October 13, 1820, is not disappointing. On this day there were offered for sale to the citizens: buildings, land, ready-made clothing, grate coal, rum, gin, cheese, drugs, a few firkins of mountain butter, green coffee, salt filled in Liverpool, forty kegs of gunpowder, mahogany furniture, and four negro men.

There was a time table for sailing vessels. The steamboat "Pocahontas" advertised its run down the James River to Norfolk. The Virginia Museum wanted everyone to see a large oil painting of Christ appearing to Mary Magdalene. There was an announcement of the "fifteenth class of the seven numbers lottery to be drawn in the city of Richmond on the eighteenth day of November next." Someone wanted the services of a young man from sixteen to nineteen years of age "who stood well in the art of penmanship." The Richmond troop of cavalry announced a parade for the next Saturday. One John Burns, lately arrived from Europe, solicited private pupils. One death and one marriage were recorded for the day. There were the usual letters to the editor.

Foreign news was entirely concerned with the English Queen Caroline's trial for adultery which her adulterous husband King George IV was pushing in Parliament. Under domestic news, considerable space was given to an article on respiration and the circulation of the blood by a Dr. Carson who had actually experimented on a number of animals, including the ox, the cat and the rabbit. Scant attention was paid to the national scene. A border exploring expedition had just returned to Detroit, and the commission appointed under the Treaty of Ghent to settle the boundaries between the United States and the British Colonies had just submitted its report. Some notice was given to the bank of the United States and there was a brief article on the public lands.

III.

Our Virginia doctor of 1820, although he wore his hair long, was clean shaven. He dressed in a plain cutaway, ate with his knife as the notion struck him, occasionally took snuff, and had never heard of a calling card or a dinner jacket.

A brief tour of observation around his premises might take us into his stable to admire two or more saddle horses, ready, not for a fox hunt, but for a day of hard riding, or for a turn in the jumper. Our doctor was not a man of affluence and leisure. Bills for his services were hard to collect from an often unfriendly public.

In his office Abernethy's *Surgery* might catch our eye, as would, perhaps, Barton's *Materia Medica*, Bell's *Surgery*, Burn's on *Obstetrics*, Cheyney *on the Larynx and Bronchi*, Cullen's *Practice of Physic*, Haighton's *Midwifery*, Rush's *Works*, the *London Pharmacopoeia*, Scarpas' *Surgery*, Triplett on *Apoplexy*, and Underwood on *Children*.

A peep into his saddle bags would reveal no instruments of precision, not even a stethoscope or a thermometer, but there would be lancets, scissors, tweezers, needles and thread, a saw, a seton, scarifiers and cups, a blistering plaster, Dover's powder, ipecac and opium pills, and laudanum, jalap, senna, rhubarb, calomel and salts, castor oil, antimony, Black Wash and the bark.

In 1820 the large slave population of Virginia provided a considerable part of the practice of the average physician. It is noteworthy that the slave owner carried heavy investments in his slaves and, aside from any humanitarian considerations, wanted to take no risks of their sickness and death. Slave

practice was common, lucrative and of a superior order.

It is to be remembered that our doctor was a general practitioner. He had not contracted the itch to specialize. He believed in a humoral theory of medicine, and knew little of organ pathology or specific disease. He did his own social service work, and practiced psychosomatic medicine daily. When we recall that probably 80% of modern medicine is concerned with the psyche, the field of usefulness of the good physician in 1820, in spite of his lack of penicillin and the sulfonamides, was by no means as restricted as some are inclined to believe.

IV.

In 1820 this country was not plagued by the hosts of proprietary medical colleges which later carried medical education into such disgrace. At that time the prospective medical student had a choice of eight good schools. There were none in Virginia, and only one in the South (Transylvania). Virginians usually went to the University of Pennsylvania, the oldest and most renowned. The apprenticeship, of course, was still in vogue, and the majority of doctors got their training through this old but imperfect system.

The Virginia doctor in 1820 had access to only four native medical journals—all that were published in America. These were the ephemeral *Medical Repository* and the short-lived *American Medical Recorder; the New England Journal of Medicine and Surgery;* and, what has since become our oldest and most aristocratic medical publication — the *Philadelphia* now the *American Journal of Medical Sciences.* The last two were not unlike in their emphasis on what was calculated to appeal to the average doctor in a rural community with an interest confined to practical matters. The case history, obstetrics, the newest use of such drugs as mercury, prussic acid, arsenic, silver nitrate, the medicinal virtures lately discovered in our indigenous plants—this is what was to be read that year in these journals.

Of particular interest to Virginians was the *Philadelphia Journal of Medical Sciences*—then in its first volume. It was edited by Nathan Chapman, who had been born in Fairfax County, Virginia. Professor of the Institutes and Practice of Medicine in the University of Pennsylvania, and star attraction for Southern medical students, Chapman was destined to become the first president of the American Medical Association. Especially pleasing to the Virginia doctor, thumbing the pages of this newest medical publication on the thirteenth day of October, 1820, was Chapman's dedication of the volume to James McClurg, of Richmond, whom he called "an illustrious citizen of my native state."

It might be of interest in this centennial year to speculate on the physicians our Virginia delegates would have encountered from other parts of the country had the American Medical Association been organized in 1820 instead of twenty-seven years later. In all likelihood there would have been in attendance, besides Chapman, two other native Virginians: William Horner and Ephraim McDowell. From Boston would have come Warren, Gorham, Channing, Bigelow, Jackson, and Waterhouse; from Philadelphia, besides the two Virginians just mentioned, Gibson, Coxe, James, Barton, and Physick —the latter talking about his improved use of the snare in the removal of tonsils and hemorrhoids; from New York, Hosack, Mitchell, Dewitt, Post, Bard, Smith and Valentine Mott who had just tied the innominate artery; from Kentucky, Dudley, Brown, Caldwell and Nathan Smith. Perhaps William Beaumont would be there. He had not yet met Alexis St. Martin, but was already endowed with the scientific spirit. Daniel Drake could have been counted on, and Horatio Jameson who this very year had won a great reputation for resecting the superior maxilla.

V.

I must ask you now to exercise your imagination again. It is still 1820, but the day is December 15th. On this day seventeen physicians of Richmond and Manchester met to form themselves into a society to be styled the Medical Society of Virginia. Three dominant ideas were in the minds of the founders of all early medical societies: (1) the improvement in medical education—then at a very low ebb: (2) the placing of a quietus on professional rivalry and quarrels through the evolution of codes of ethics; and (3) the control of the charlatan through the standardization of medical fees. The preamble of the constitution our founders were to write declared that "the good people of this Commonwealth heretofore suffered great inconvenience and injury from an almost exclusive dependence on foreign institutions for instruction in the principles

of this essential branch of knowledge; that the character and best interests of the state require that the evils of such dependence should as far as possible be removed by the introduction of institutions of our own; and that an association, having in view this object long so highly prized and so anxiously expected by its liberal minded inhabitants is now deemed practicable."

To this was added a resolution that speaks for itself: "No person holding in part or whole any patent medicines or remedies for disease shall be eligible to a seat in this society." Our forebears in 1820 were spared homeopathy, osteopathy, and chiropractics. Eclecticism, Thomsonianism, Mesmerism, were cults of the future and had not raised their ugly heads. Nevertheless, there were irregular practitioners a plenty. In 1847 for example, of 972 Virginia doctors in 74 of 119 counties, 249 held no diploma, a proportion of one in four.

We do not know all the seventeen founders of the society. We have only the list of incorporators to guide us. We do know that Virginia's most eminent and venerated physician, James McClurg, was elected its first president. He had been educated at William and Mary and at Edinburgh, had been an officer in the Revolutionary Army, and the only professor of anatomy and medicine in William and Mary College. He had moved to Richmond where he gained professional and political prominence. He was a friend of Washington, and at one time he was mentioned for Secretary of State.

James Henderson was the vice-president. He was a Scotsman, who had moved from Amelia County to Richmond to acquire a large and lucrative practice. He was destined to become the third president of the society. The list continues with William Foushee, Edinburgh graduate and Revolutionary soldier, who had come up from Norfolk to become the town's first Mayor. After him one of Richmond's well known streets is named. He was the society's second president. Following him in the list is the name of James Brown McCaw, commanding officer of the Chimborazo Hospital during the Civil War, and grandfather of Walter D. McCaw, a brigadier-general and once chief surgeon in the Philippine Islands.

The roll continues with the names of George and Robert H. Cabell. One of the Cabells and their kin, James Lawrence Cabell, made history later at the University of Virginia. George Watson was educated at William and Mary, at the University of Pennsylvania, and Edinburgh. He was to serve on the town's Board of Health. His library is now owned by the Richmond Academy of Medicine; John Hayes had been an officer in the War of 1812; and Micajah Clark, apprenticed to John Adams, later a Pennsylvania graduate, was called by Dr. Physick "a born physician." There were Thomas and Nathaniel Nelson, and William A. Patteson who had moved to Richmond from Petersburg. He had invented a method of vaginal hysterectomy which was highly regarded. He was three times president of the society.

The list concludes with James Blair, founder of a drug store in Richmond that is still thriving; William H. Henning, a Revolutionary surgeon; James Worrall, an ardent believer in phlebotomy; John Adams, an early Mayor of Richmond, after whom one of her present streets is named; Lewis W. Chamberlayne, Pennsylvania graduate, who lived outside of Richmond at "Montrose," one of the founders of the Medical College of Virginia and its first professor of Materia Medica; R. L. Bohannan, also a graduate of Pennsylvania, a founder of the Medical College of Virginia, first professor of obstetrics; R. A. Carrington; John Dove, founder of Dove Lodge, whose Hollywood monument is one of the largest and most imposing in the cemetery; Branch T. Archer; William Tazewell; Edward H. Carmichael, and Philip Augustus Klepstine.

As one reads the record, one is impressed by the number of these men who studied at the University of Pennsylvania and at the University of Edinburgh. Some were young men; some were old men. A number had been in the Revolutionary Army; six had served in the War of 1812. Many attained the highest political recognition.

To such men, tonight, we grant the immortality of remembrance, confident that another hundred years will see more astonishing advances in medicine than we dare dream of, even in this year of atomic fission with all it promises if (controlled) for scientific progress and for human betterment.

828 West Franklin Street.

ACUTE PERIPHERAL ARTERIAL EMBOLISM AND THROMBOSIS*

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One of the attractions of our chosen profession is its non-static nature. New theories, new armamentarium constantly force us to review old subjects. Thus the new drugs, heparin and dicoumarin, making practical, anticoagulant therapy, necessitate a revision of an old subject—arterial embolism and thrombosis. For the chief causes of failure of therapy in pre-anticoagulant days were secondary thrombosis at the site of the embolectomy if surgery was attempted, and the rapid formation of the tail thrombus distal to the embolus. Early diagnosis, effective anticoagulant therapy can prevent the formation of the tail thrombus and greatly reduce the incidence of secondary thrombosis after embolectomy. The changed prognosis is well illustrated in a current report of five consecutive successful aortic embolectomies by Murray. Murray credits to heparin his good results. Nystrom reports a case in which he twice performed arteriotomy and embolectomy, only to be foiled by secondary thrombosis, and then reopened the artery for the third time and injected heparin with a perfect result.

ETIOLOGY OF PERIPHERAL EMBOLISM

The common causes of emboli large enough to occlude the major arteries of the extremities are rheumatic heart disease, arteriosclerotic heart disease, and coronary infarction. The heart is often fibrillating or decompensated. In addition to the heart, peripheral embolism may result from thrombi deposited on atheromatous plaques of the aorta or rarely from venous thrombi swept into the arterial system through a patent foramen ovale.

SYMPTOMS AND SIGNS

The cardinal symptoms and signs of peripheral arterial embolism are sudden pain in the extremity, followed by pallor and coldness of the part, loss of sensation, inability to use the part, absence of arterial pulsation, collapse of the cutaneous veins and, finally, cyanotic discoloration, indicating impending gangrene. Pain may be entirely absent until a large amount of muscle becomes ischemic—several hours after the lodgment of the embolus. The greatest pain may not be at the site of occlusion, as illustrated by the severe pain in the knee in embolism at the femoral bifurcation.

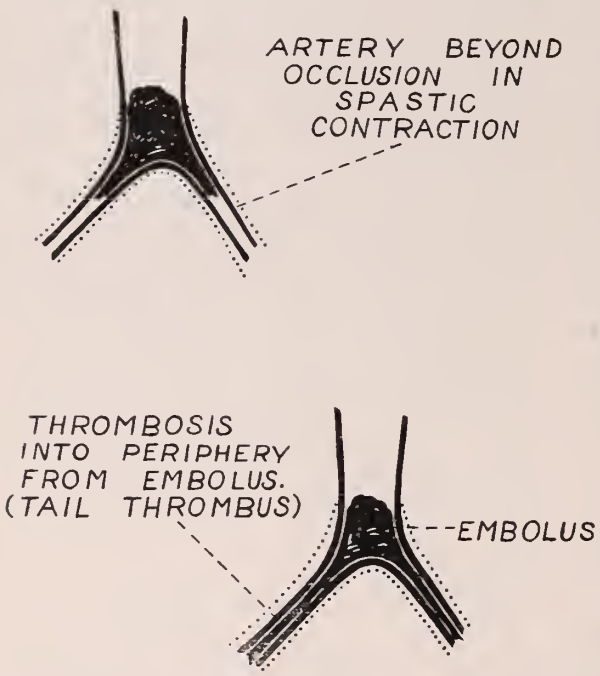
LOCATING THE SITE OF THE OCCLUSION

1. When an embolus is lodged at the bifurcation of the common femoral a pulsation is present in the common femoral at the inguinal ligament level. Just below, all pulsation is absent.
2. When the occlusion is above the inguinal ligament, or in the iliac artery or the aortic bifurcation, no pulse is felt at the inguinal ligament level or below.
3. Usually proximal to the embolus there is an excessively prominent pulsation of the artery, as in an amputated stump; actually a pulse may be felt several cm. distal to the obstruction due to pulsation transmitted by the clot itself.
4. Skin temperature changes are fairly diagnostic. The level of the change from cold to warm skin is above the ankle in popliteal occlusion, just above or below the knee in occlusion at the femoral bifurcation and in the upper third of the thigh in iliac occlusion.
5. The oscillometer is helpful in locating the occlusions below the femoral bifurcation.

The majority of emboli occur in the femoral and iliac arteries or at the bifurcation of the aorta. The most frequent site of localization is the lower femoral artery. The next common site is at the branching of the common femoral and profunda femoris. The point of lodgment is usually where the major vessel branches—as the thrombus encounters vessels of narrower lumen. Determination of the position of the embolus is not difficult. Extreme tenderness over the region of occlusion may be present, but is a late sign. The exact point is determined by noting the level at which arterial pulsation is still present and the point at which arterial pulsation is no longer palpable. In the lower leg, popliteal region or lower thigh the oscillometer will help demonstrate the site

*Read before a recent meeting of the Norfolk County Medical Society.

of occlusion. A full bounding pulsation, as in an amputation stump, may also be present in the artery just proximal to the occlusion. Thus, when the embolus had lodged at the bifurcation of the femoral artery, a vigorous pulsation of the common femoral may be palpable a little higher at the inguinal ligament level. A few centimeters lower in the thigh, no pulsation is felt. When an embolus has lodged at the bifurcation of the aorta no pulse is felt at the inguinal ligament level on either side. Changes in the skin temperature furnish supporting data. The line at which the temperature of the skin changes from low to normal is located just above the ankle in occlusion of the popliteal artery and at the junction of the lower and middle third of the thigh in



occlusion at the bifurcation of the femoral artery. When the common iliac artery is occluded the point of skin temperature change is located at about the junction of the middle and upper third of the thigh.

In a fair proportion of cases, immediate symptoms and signs may suggest complete obstruction at the aortic bifurcation, but under observation for a few hours the findings change, indicating that what was originally a thrombus impacted at the bifurcation has broken up and slipped down one or both sides to a lower level. The clinical picture may then be that of a bilateral femoral or popliteal occlusion.

Sometimes, small emboli may pass into the periphery and initiate immediate vasospastic phenomena and temporary symptoms and signs of arterial deficiency which subsequently disappear more or less completely.

The Course of Events—The Role of Spasm

Spasm is an important element of all instances of arterial embolism. Spasm of the artery beyond the occlusion prevents the embolus from descending further in the arterial system, and thus serves a useful purpose. There is unfortunately concomitant spasm of the related arterial collaterals preventing channeling of the blood around the site of embolic occlusion. The course of events in arterial embolism may be described as follows: The embolus lodges at a point of bifurcation, assumes the shape of and occludes the lumen of the vessel. The branching artery beyond the occlusion goes into spastic contraction. Spasm of the collaterals further diminishes the volume of blood entering the artery beyond the occlusion. Extensive thrombosis occurs from the site of embolus into the periphery—the so-called tail thrombus. Variations of the phenomena are many. At the aortic bifurcation the thrombus may be forced partly down each iliac, forming the so-called rider, or saddle thrombus. Or fragmentation of the thrombus may occur, large or small emboli passing down each iliac to the femoral.

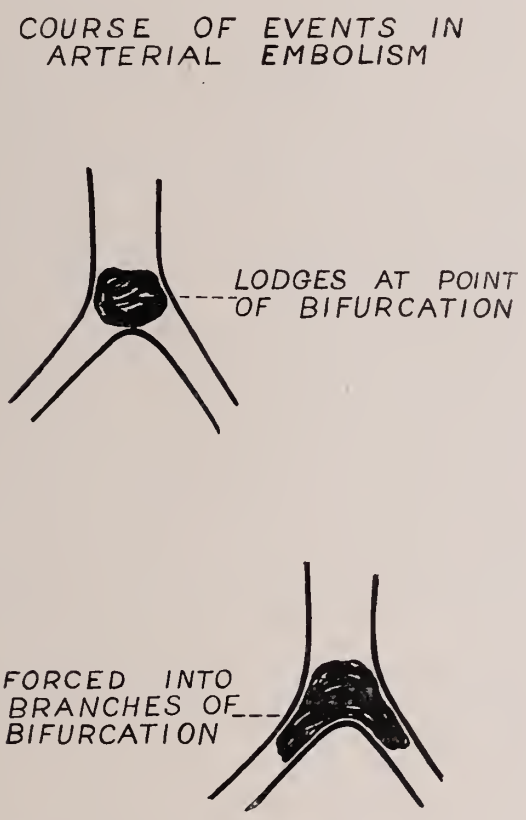
Arterial Thrombosis

Arterial occlusion may occur as the result of local thrombosis rather than embolism. This is not uncommon in arteriosclerosis obliterans, thrombo-angiitis obliterans and in a cardiac decompensation. Nygaard and Brown in 1937 described five cases of simple idiopathic arterial thrombosis and applied the name "essential thrombophilia" to these cases. They found an increased platelet count and increased coagulation time of the blood plasma and presumed that the thrombosis in their cases was explained on this basis. Such cases now would be expected to show an increased heparin tolerance test, as described by DeTakats. One of the cases reported in the paper probably belongs to this group. Acute arterial thrombosis may also result from trauma. In 1940, in a paper entitled, "Acute Traumatic Arterial Thrombosis of the Extremities", we reported three cases of arterial thrombosis occurring in previously healthy individuals. The first case was that of

a machinist who developed a brachial thrombosis presumably from using a water hammer; the second, a tractor driver who developed popliteal thrombosis, and the third a banker, who developed a thrombotic occlusion in a pre-existing popliteal aneurysm.

Treatment

Treatment of peripheral arterial embolism depends on the extremity involved, the site of the arterial occlusion, the duration of the occlusion before a diagnosis is made, and the general condition of the patient.



Medical management is indicated when the embolism is low or in a small artery or when the case is seen later than ten hours after embolism, and for embolism of the upper extremity, where collateral circulation is so abundant.

The medical treatment consists of opiates for pain, of antispasmodic therapy with papaverine hydrochloride and repeated injections of the sympathetics, of anticoagulant therapy with heparin and dicoumarin and of continuous use of the rhythmic constrictor. The new drug, tetra ethylammonium bromide will be useful. It will produce a sympathetic block when given intravenously or intramuscularly. The extremity should be level with the bed or slightly lowered. It should be wrapped loosely in cotton in order to preserve its natural warmth. Cooling reduces the metabolism of the part and thus lessens its need for blood, but it also increases the vascular spasm present. Therefore, unless it is known that irreversible changes have occurred and that amputation is inevitable, cooling should be withheld. Lumbar sympathetic novocaine injections should be done repeatedly if refrigeration is resorted to to offset the spastic effect of cooling. Anticoagulant and antispasmodic therapy are extremely important in preventing thrombosis of the artery distal to the site of the embolus.

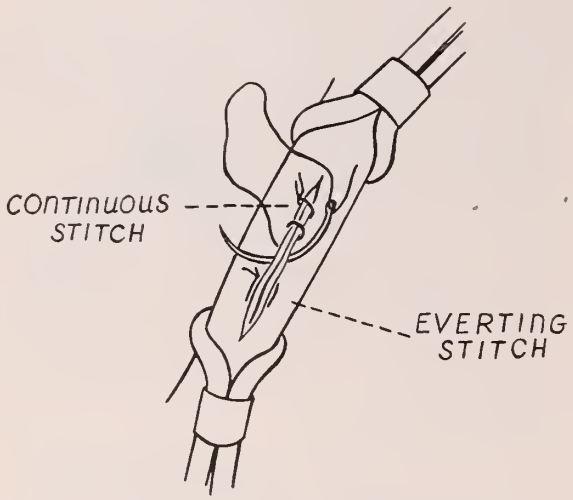
Immediate Treatment of Arterial Occlusion

1. Place extremity in dependent position (10 or 15 degrees below the horizontal).
2. Wrap extremity in sheet wadding.
3. Inject intravenously a potent vasodilator. (papaverine hydrochloride ½ gr.)
4. Begin anticoagulant therapy even if embolectomy is considered —heparin 50 to 75 mg. intravenously every three hours. Occlusion of the terminal arteries by a tail thrombus distal to the embolus may make an otherwise successful embolectomy a failure.
5. Relieve vasoconstrictor spasm by paravertebral novocaine block of the related sympathetics.
6. If there is evidence that the occlusion is in the femoral or iliac artery or at the aortic bifurcation, consider embolectomy as an emergency procedure to be done within six or eight hours from onset of the occlusion.

Surgical treatment is indicated in embolism to the bifurcation of the aorta, in embolism to the femoral, above, below or at the femoral bifurcation, and in embolism to the popliteal artery in exceptional instances. Aortic embolism is apt to be fatal without embolectomy. In Scandinavia, the home of embolectomy, physicians have learned to diagnose their cases early enough to permit use of frequent and successful embolectomy. Thus, Nystrom in 1936 was able to report 382 Swedish cases, with restored circulation in 22.5 per cent. Twenty-one (21) successful aortic embolectomies, reported in the literature, were reviewed by McClure and Harkins in 1943. And, as mentioned previously, Murray in

1943 was able to report 5 successful aortic embolectomies, in all 5 of which there were no technical difficulties and no accidents or disaster. It can be said that about one-half of patients having embolectomies within the first ten hours will leave the hospital with restored circulation.

As the majority of emboli occur in the femoral or iliac arteries, the usual site of embolectomy will be over the common femoral, with the abdomen left exposed for extension upward of the incision if necessary. The incision is preferably made below the largest part of the distended artery, so that the tail thrombus can be removed before the main embolus and the blood pressure may force the embolus out



CLOSURE OF ARTERIOTOMY

of the incision. Rubber tubing is placed about the artery above and below the site selected for arteriotomy and about major branches—to control bleeding and to prevent fragments of emboli from passing down into the periphery. Suction and ordinary instruments may be used to remove the tail thrombus and the embolus. When a free flow of blood is obtained from above, the incision in the artery is closed. One or two interrupted sutures are placed to evert the intima and the suture completed with continuous arterial silk. Anticoagulant therapy and sympathetic nerve blocks should proceed and follow embolectomy. Heparin therapy should be started as soon as the diagnosis of arterial embolism has been made. This is done to prevent a thrombus from occurring within the arterial system distal to the embolus, until the removal of the embolus can be carried out. After the peripheral thrombus and embolus have been removed, 2 or 3 cc. of heparin are injected intra-arterially at the site of the arteriotomy. In the lower extremity, peripheral embolectomy performed under local anesthesia and supplemented by lumbar sympathetic nerve block, papaverine and heparin and performed within 6 hours of the onset of the occlusion offers an excellent prognosis.

I have had no experience with the technique of aortic embolectomy. Murray writes that the technical procedure of removal of such an aortic embolus is not difficult, and if undertaken within 12 to 20 hours after the accident and successfully completed, changes the prognosis to one of optimism providing the pre-existing cardiovascular disease has not itself jeopardized the chances of the patient.

Murray uses an abdominal extra-peritoneal approach. The incision is a right paramedian one, extending from 2 inches above the umbilicus to the symphysis. The transversalis fascia is divided and the peritoneum is bluntly dissected out of the right iliac fossa and retracted. Bull-dog clamps are applied around the right and left external and internal iliac vessels. A surgical tape is passed around the aorta in the form of a loop above the embolus. The arteriotomy is made through the most accessible spot of the right common iliac. A profuse squirt of blood proves that the circulation is cleaned of clots. The bull-dog clamps are tightened above and below the incision in the artery, 500 units of heparin in saline are placed in the lumen of the vessel through the open incision and the incision closed with a continuous silk stitch, placing the stitches not more than 1/16 inches apart. About 800 more units of heparin are injected through the wall of the right common iliac before closing the abdominal wound.

Linton has described a somewhat similar aortic embolectomy, using Bethune lobectomy tourniquets to temporarily occlude the arteriotomy site. He simplifies the procedure by isolating the iliacs only and performing arteriotomy through the right common iliac without a tape about the aorta.

Summary

Arterial embolism of the extremities is a surgical emergency. Restoration of the circulation by embolectomy is the treatment of choice for aortic and lower extremity occlusions. To offer a good prog-

nosis, aortic embolectomy should be undertaken within 12 to 20 hours from the onset of the occlusion; femoral embolectomy, within 6 hours. Medical management is the treatment of choice for embolism of the upper extremities, for cases seen late, and for embolism of smaller arteries. Anticoagulant therapy and sympathetic nerve block are important adjuvants of both the surgical and medical treatment.

CASE REPORTS

THROMBOSIS OF THE POPLITEAL ARTERY

Case 1.—Mr. R. F., age 56, a printer by trade. Admitted to De Paul Hospital on 12/25/45. A patient of Dr. Richard Reynolds.

History: The day before admission to the hospital the patient had awakened with a cramp-like pain in the right foot. He went to work but was forced to return home after several hours because of severe pain in the calf of the same leg and marked coldness of his foot. The patient's previous health had been good. He had observed no prior leg pain or coldness and had no claudication on walking.

Examinations: B. P. 140/90, Temp. 98.6, pulse 100. General physical examination normal other than the right lower extremity. There was no cardiac arrhythmia and no murmurs. The right foot was blanched, cadaveric and cold. There was a change from low to warm skin temperature at about the junction of the middle and lower third of the leg. Local tenderness was marked in the calf. No pulsation was detectable in the right dorsalis pedis, popliteal or femoral artery. Although femoral pulsation was not observed by palpation, an oscillometric index of ½ point was obtained in the right midthigh. No abnormal findings were noted in the opposite extremity.

Treatment and Clinical Course: The right lower leg was bandaged with several layers of sheet wadding, the head of the bed was elevated, whiskey was given by mouth and spasmalgin by "hypo". The lumbar sympathetics were injected with novocaine every 12 hours for 3 times, the rhythmic constrictor was used for 2 hour sessions three times daily. Dry gangrene gradually developed and eight days after admission there was a definite line of demarcation several inches below the knee. A good pulsation was now detectable in the femoral artery and an oscillometric index of ¾ths point was present just above the right knee. A histamine test gave positive reactions in the thigh and a fair wheal just below the knee. The leg was packed in ice up to the line of demarcation. Eleven days after admission, a Callender type of lower thigh amputation was performed under spinal anesthesia. There was a normal post-operative course with primary healing of the stump. The patient was discharged on 1/15/46, twenty-one days after the onset of his illness.

Comment: Arterial spasm accounted for the signs of diminished femoral circulation, an interpretation subsequently substantiated by an increased oscillometric index and a good femoral pulsation on the eighth day after admission. The medical treatment of occlusive arterial disease instead of arteriotomy was initially elected because of the following points: The occlusion was in the popliteal artery, the occlusion was due to thrombosis rather than embolism, the case was first seen 24 hours after the onset of his illness.

Case 2.—Mrs. T. H., age 42, a patient of Dr. Bryan Grinnan and Dr. Albert Crosby. Admitted to De Paul Hospital 1/5/45.

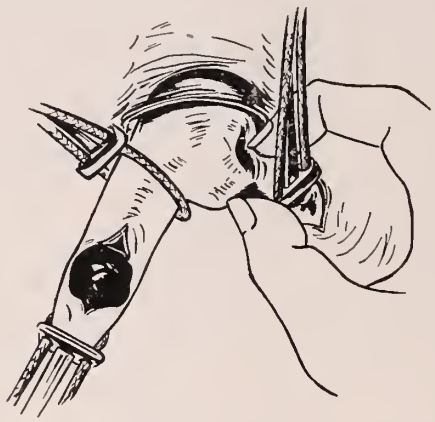
History: The patient complained of shortness of breath and vomiting. She had had two previous admissions for cardiac insufficiency. She was seen the evening of admission by Dr. Grinnan, who made a diagnosis of rheumatic heart disease with mitral stenosis, mitral insufficiency with auricular fibrillation, and signs of fluid at right base. The next morning the cardiac symptoms and signs were better but the patient was complaining of severe pain and numbness in the right foot and lower leg. The right foot was colder and paler than the left. Dr. Grinnan made a diagnosis of embolus to the right popliteal artery.

Clinical Course: The patient's cardiac status remained precarious. She complained only slightly about her right leg, altho the foot remained cold and the skin very pale. On the fourth day after admission, the patient had sudden pain in left chest, increased by breathing, and a diagnosis of pulmonary embolus was made. Two days later, severe pain again developed in the right leg and the leg from the knee down was observed to be cold and cadaveric. A second embolic episode to the right leg was presumed.

I first saw the patient on 1/16/45, eleven days after admission, at the request of Drs. Grinnan and

Crosby. A dry gangrene of the right leg was present. The toes were mummified. The skin from the knee down was pale and discolored. The dermatherm indicated that the level at which the surface temperature changed was in the lower third of the thigh. No pulsation was detectable in the dorsalis pedis, posterior tibial, popliteal, or femoral artery. Oscillometric readings were zero from foot to groin. Arterial obstruction with occlusion as high as the femoral was apparent.

The opposite (left) leg looked pale, and the veins were poorly filled. Oscillometric readings were zero from foot to mid-thigh. Altho the patient was having no discomfort in this leg, it was apparent that there was marked deficiency of the arterial circulation and that this leg also was threatened with gangrene.



TRANSPERITONEAL AORTIC EMBOLECTOMY, (LINTON)

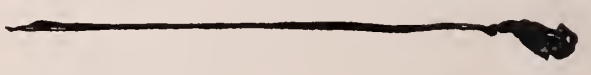
We recommended packing the right leg, already gangrenous, with ice. Refrigeration would allow time to improve the patient's cardiac condition. Active therapy was begun to limit the extent of gangrene that seemed inevitable in the left leg. The leg was wrapped with sheet wadding and slightly cooled with two ice bags. Anticoagulant therapy was instituted, the rhythmic constrictor was used several hours daily.

On January 28th, twenty-three days after the patient's admission, Dr. Grinnan felt that the time was optimal for surgery and a guillotine type of lower thigh amputation was performed by Dr. Crosby under ethylene-oxygen anesthesia. Cardiac fibrillation developed during the procedure, but the amputation was completed in 12 minutes and the patient left the table in relatively good condition.

In the convalescent period, continued use of the rhythmic constrictor was made in the hopes of limiting the surgery on the left leg to a lower leg amputation. On 2/9/45 with the left foot now gangrenous, a histamine test gave positive wheal reactions several inches below the knee and on 2/12/45 Dr. Crosby performed a leg amputation about six inches below the knee. Ethylene-oxygen anesthesia was again used. The heart again fibrillated, blood pressure became unobtainable and a pulse was not palpable. Anesthesia was discontinued and oxygen given, and the patient again responded nicely.

The patient was discharged on 5/16/45, with a well compensated heart, a healed thigh amputation on the right, and a healed lower leg amputation on the left.

Comment: The patient was brought out of a serious episode of cardiac fibrillation and failure by an internist, a surgeon skilfully performed the successful amputations, a keen anesthetist overcame the hazards of the anesthesia. Handling of the peripheral vascular problems along modern lines enabled delaying surgery until the cardiac status could be improved and probably contributed towards a lower leg rather than a thigh amputation on the left leg. In retrospect one must conclude that the extremity pathology resulted from bilateral femoral embolism. A saddle embolus at the aortic bifurcation may have been present, fragmenting and descending first into the right and a few days later into the left limb. The leg symptoms came on insidiously while the patient's cardiac status was such as to cause grave fear of her immediate death, so that there never was opportunity for embolectomy.



EMBOLUS WITH TAIL THROMBUS

Case 3.—Mr. J. W., age 65, a patient of Drs. Salley, Gwathmey and Newcomb. Admitted to Norfolk General Hospital on 2/21/46.

History: A burning pain developed rather gradually in both legs the day before admission. Later in day, he developed severe pain in the right leg and both legs felt cold.

Examination: Right foot and lower leg cold, pale, numb, veins collapsed. A purplish mottling about right knee and thigh. Tenderness and pain in right knee and thigh over Hunter's canal. Left foot and lower leg numb and cold, but not pallid or ischemic. No dorsalis pedis, popliteal or posterior tibial pulsation in right inguinal region, slight femoral pulsation in right inguinal region; slight femoral pulsation at left inguinal level. Oscillometric readings were zero to well above knee on both sides. Skin temperature line of change from cool to warm at the junction of the upper and middle third of the right thigh, and at the junction of the lower and middle third of the left thigh. Heart sounds were recorded as distant but otherwise normal. The pulse was 80 and the B.P. 130/80. There was no evidence of fibrillation, cardiac decompensation or coronary infarction to account for the origin of the embolus, but the patient looked toxic, shocked, and was in a lot of pain. I made a diagnosis of rider or saddle embolus at the aortic bifurcation and, as the occlusion had now been going on for 24 hours, advised packing both legs in ice from foot to thigh. Nine mgms. of pantocaine were given intraspinally in the patient's room with marked relief of pain. Papaverine hydrochloride was given intravenously and whiskey by mouth was given for several days.

Subsequent Course: Dry gangrene of both lower legs developed, but the patient's general condition improved and he was free of pain with his lower extremities constantly refrigerated. Guillotine amputation of the right leg through the upper thigh was performed by Dr. Gwathmey on 3/16/46 under refrigeration anesthesia.

A similar procedure was performed through the upper third of the left thigh on 3/22/46. The patient's subsequent course was one of continued improvement. Both stumps healed well. The patient is well and actively conducts a large business at this writing.

Comment: The embolus probably arose from an atheromatous plaque in the aorta, and lodged temporarily at the aortic bifurcation and then descended as two fragments, one into each femoral. The occlusion was evidently at the femoral bifurcation on both sides, for a pulse could be felt at the left inguinal ligament level.

In retrospect, a bilateral femoral embolectomy under local anesthesia certainly could have been tried when the patient was first seen, but the patient had refused hospitalization during the first twelve hours of his illness. Heparin therapy the night of admission might also have been beneficial. Refrigeration of both extremities for a period of 3 weeks was most valuable, permitting amputation after the patient's general condition was much improved. Patients with such massive bilateral gangrene usually die of toxemia, rarely recovering enough for amputation.

Case 4.—Mrs. H. C., age 42, was under the care of Dr. M. S. Fitchett because of mitral stenosis and auricular fibrillation. Two months prior to her admission to the hospital she had had increased shortness of breath and observed that there was pain in the left foot and calf on walking. A week prior to admission she had an episode of sudden pain in the right thigh along Hunter's canal and over the knee, lasting for several hours. Spontaneous pain disappeared, but the right leg also became cold and the patient now experienced claudication in both legs on walking a few feet.

The patient entered De Paul hospital on May 5, 1945, a week after her last episode of spontaneous pain. Dr. Fitchett's note recorded an enlarged heart with a presystolic mitral murmur. The cardiac rhythm was totally irregular. B. P. 110/70. I saw the patient on 5/9/45. She did not appear ill. There was definite coldness of both lower legs. There was blanching on elevation and slow filling of the veins on dependency. Repeated flexion of the ankles with the legs elevated reproduced the patient's claudication pain. No pulsation was noted in the dorsalis pedis, posterior tibial, popliteal arteries of either leg. Femoral pulsation was variable, at times being present, at times absent. Oscillometric readings were good above the knee on both sides and zero below. A diagnosis of bilateral popliteal occlusion from small cardiac emboli was made. Buerger's exercises were prescribed and the patient was given rhythmic constrictor apparatus to use on each leg for six hours daily at home. Her leg symptoms progressively improved. The feet became relatively warm and the patient could walk several blocks without claudication.

Comment: The mural cardiac emboli in this case

were probably small and friable, resulting in small emboli to the periphery at widely separated intervals. This interpretation is substantiated by the subsequent course of events. Several months after the above described leg complications, the patient suddenly developed dizziness, headache and weakness of one side of the body. She gradually recovered from the episode—probably a small cerebral embolus. The spastic element must have been marked because for a time no pulsation could be detected in the femoral arteries, yet complete recovery of peripheral arterial circulation ensued.

Case 5.— Mrs. M. C., Age 23, 2½ weeks post-partum and ambulatory, suddenly noticed about 5 A. M. of 8/13/46 that her right foot was cold and numb. She was not unduly alarmed and did not call her doctor — Dr. Altizer — until pain developed in the lower leg and back of knee. This was about 5 P. M. Dr. Altizer saw patient shortly thereafter and immediately made a diagnosis of occlusive arterial disease of the right leg. The patient was admitted to De Paul Hospital at 6:30 P. M., and was seen by Dr. Altizer and myself at once. There was definite diminished temperature of the right leg from toes to just above the knee. No pulsation was detectable in the dorsalis pedis, posterior tibial, popliteal or femoral artery. Just above the inguinal ligament the iliac pulsation was forceful and full. The foot and lower leg were pallid, the veins collapsed. Our impression was that the patient had arterial occlusive disease probably at the femoral bifurcation. Altho it was now thirteen hours since the onset of the present illness immediate femoral exploration was decided on. Five c.c. (500 units) of heparin were given intravenously as the operation was begun. Pantocaine-glucose spinal anesthesia was used. The incision began just above the crease in the groin, in line with the pulsating iliac artery, and extending downward several inches. On exposing the femoral artery, it was found to be non-pulsating, firm and obviously swollen by a thrombus. Arteriotomy was performed in the common femoral. A red thrombus immediately extruded itself from the incision in the artery. Suction applied distally resulted in the extraction of a red organized "tail thrombus" about 20 cm. long and 3 mm. in diameter. This was followed by a retrograde flow of blood. A gallstone forcep was then used to apply traction to the thrombus protruding from the upper end of the arteriotomy incision and a thrombus several cm. in length came out, followed by a violent gush of blood. Traction was made on the rubber tubings previously placed to control bleeding, five cc. of heparin were injected into the arterial lumen and the arteriotomy incision closed with closely placed fine arterial silk. No difficulty was experienced in getting good closure of the arteriotomy. Post-operative orders were as follows: Papaverine hydrochloride gr. ¼ intravenously every 4 hours, 300 mgms. of dicoumarin stat., continuous intravenous drip containing 2 ampules (20,000 units) heparin to the liter, inhalations of 100% oxygen with the B.L.B. apparatus, novocaine block of the right lumbar sympathetics every 12 hours for 2 days.

In the next few days, in spite of a definitely pulsating femoral artery and a warm thigh and upper leg, the foot became gradually colorless and cold. Dry gangrene seemed inevitable, so ice bags were applied to control pain and a line of demarcation awaited. A lower leg amputation was performed on 10-4-46, a guillotine type of amputation, as the first incision unexpectedly passed through infection in the fascial spaces, and a second incision higher up had to be made. Convalescence from the leg amputation was uneventful until 10-28-46 when pain and tenderness developed in the left iliac region. Left ilio-femoral thrombophlebitis was suspected. Several days later these symptoms disappeared and a split thickness graft was applied to the stump. This took 100% and the patient is now ambulatory, using crutches.

Comment: This is probably a case of idiopathic simple arterial thrombosis or "essential thrombophilia." Nygaard and Brown reported five cases so classified in 1933. As the cause is thought to be an increased coagulability of the blood, arteriotomy and thrombectomy was indicated in an age of potent anticoagulant therapy. As the common femoral was completely occluded a thigh amputation seemed inevitable. Had it been possible to perform the arteriotomy earlier—say within 6 hours— and before the lower arterial radicals had become thrombosed, an even more favorable outcome would have resulted.

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Deer Hunters Warned.

Now that the hunting season is on, Clay Schoenfeld warns in the current issue of *Hygeia*, health magazine of the American Medical Association, take it easy when you go deer hunting. You're just about as likely to die of a heart attack as of a stray bullet.

Almost 40 per cent of the deer-hunting deaths in the United States are due to heart attacks, according to the writer, a Madison, Wisconsin resident who speaks from personal experience in the north woods as well as from data compiled by various state conservation departments. Out of 18 hunter deaths in the state of Michigan during the 1946 deer season, he says, "10 were due to gunshot and eight to heart disease. In Wisconsin the heart cases actually outnumbered the bullet toll eight to five."

The trouble is that "the average man in the woods operates unconsciously at a pace and under a strain which he wouldn't think of putting up with back home," Mr. Schoenfeld observes. "The fellow who can't walk a block to catch the bus suddenly goes tramping through underbrush on a 10-mile deer drive. The man who never carries out his furnace ashes decides to drag a 200 pound buck a half-mile back to the road. Or the chap who sits calmly for 51 weeks at a desk stands by the hour with pounding pulse at a deer crossing. . . .Most of the 1946 heart attack victims were hunters in the middle age group, men no longer in their physical prime who got too excited or strained themselves in the woods. . . .Weak hearts aren't limited to men past 40, however. Several diseases of childhood lead to heart weaknesses among younger people. Rheumatic fever is the worst offender."

New Books.

Among the recent books received at the Library of the Medical College of Virginia are the following, which are available to our readers under usual library regulations:

Beck—Obstetrical practice. 4th ed.
Behrend—Diseases of the gall-bladder and allied structures.
Bierman—Physical medicine in general practice.
Conel—The postnatal development of the human cerebral cortex. Vol. III.
Edgerton—Readjustment or revolution?
Galen—On the natural faculties.
Gardner—Katherine Kent.
Grant—An atlas of anatomy. 2nd ed.
Hinselwood—The chemical kinetics of the bacterial cell.
Holmes—Introduction to clinical neurology.
Holmes and Robins—Roentgen interpretation. 7th ed.
Karsner and Koletsky—Calcific disease of the aortic valve.
Kraetzer—Procedure in examination of the lungs.
de Laubenfel—Life science.
Leonardo—History of medical thought.
Lewis—Diseases of the heart. 4th ed.
McComb—Internal medicine in general practice. 2nd ed.
Rosenberg—Chemistry and physiology of the vitamin.
Rubin—Diseases of the chest.
Strecker—Fundamentals of psychiatry.
Strecker and Ebaugh—Practical clinical psychiatry. 6th ed.
Strain—Teen days.
Waksman—Microbial antagonisms and antibiotic substances.
Wechsler—Clinical neurology. 6th ed.
Wiener—Skin manifestations of internal disorders.

THE TREATMENT OF SEVERE COMPOUND FRACTURES OF THE FOOT

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The orthopedic section of a general hospital while overseas treated 486 compound, comminuted, fractures of the foot, excluding phalanges, during the year of 1944. Although not all of these injuries could be classified as severe, the majority were the results of high explosive shell fragments or small arms fire. Many of the more severe wounds of the feet ended in amputation before reaching our hospital, and 8 that reached us had to be amputated, necessitated by severe tissue loss, infection or circulatory failure. There were many, however, that required radical treatment to achieve a useful foot.

An analysis of these fractures is shown by the table below.

Compound, comminuted fractures	Number Cases	Battle Casualties	Non-Battle* Casualties	Assoc.† Injuries	Numbers &‡ Type of Duty	Average Days Hosp.
Metatarsal	234	164	70	88	43—A	72
					36—B	74
					155—C	44
Tarsals	150	114	36	94	24—A	74
					19—B	90
					107—C	48
Os Calcis	102	80	22	47	7—A	64
					9—B	82
					86—C	44
Totals	486	358	128	229	74—A	70
					64—B	83
					348—C	45.3

*More than 90% non-battle casualties were caused by soldiers own rifle at close range.
†Included in associated injuries are such things as fractures of long bones, head, chest and abdominal wounds.
‡A represents full duty; B limited assignment; C Zone of Interior for more time or treatment.

Early experiences with severe compound, comminuted, fractures of the foot were not yielding satisfactory results. Patients with many small fragments developed sepsis, particularly if the short bones were involved. Nearly always in fractures of the tarsal bones a joint is involved and infection destroys the articular cartilage. The result is a partly fused, draining, painful joint. Before operation many of these cases were septic with temperatures ranging up to 102 degrees. These required further excision of dead tissue, with every effort being made to obliterate all infected or potentially infected joints and dead space.

It was found that when soft tissue defects were allowed to granulate, healing appeared to progress slowly for 60 to 90 days, but not to completion. Frequently the wound would break down and drain profusely. This was particularly true if the wound had been made by a shell fragment, with increased soft tissue damage resulting in an excess scarring with contractures, and poorly healed skin or often keloid formation. Hence it was decided to make every effort to close the soft tissue, even if removal of some normal bone was necessary.

Reparative surgery optimum time is between 5 to 10 days provided the general condition of the patient permits. Unfortunately, many of these cases for various reasons were not admitted to this hospital until 15 to 25 days after injury. All received systemic penicillin therapy and blood replacement therapy prior to surgery.

After closing the deep layers as completely as possible, the skin on the plantar surface was sutured, utilizing relaxing incisions if necessary. If possible, the skin on the dorsum of the foot was also closed at this operation—depending on the wound condition. Usually the wound on the dorsum could not be closed and required grafting later. These grafts were placed as soon as possible, without permitting the wound to granulate to the level of the surrounding skin, in an effort to avoid later pressure on the resulting scar.

Written by author while in Service as Major in the Medical Corps.

CASE REPORTS

Case 1.—Age 28. This soldier was wounded in action by shell fragments on 8 April 1944 at Anzio, Italy, receiving the following wounds of the left foot: fracture, compound, comminuted, complete, 4th and 5th metatarsals with loss of 90 per cent of bone substance of these 2 bones; fracture, compound, comminuted, complete, 3rd metatarsal, cuboid and 2nd and 3rd cuneiforms; and a severe perforating wound of foot over the area of 3rd and 4th metatarsals from dorsal to plantar surface, both entrance and exit measuring 10 x 8 cm., following the debridement. He was received four days after injury and penicillin therapy instituted six days after injury. At operation, all devitalized bone was removed, which included the remaining parts of the 3rd and 4th metatarsals, and both wounds were sutured. The wounds healed per primam. He began to walk with crutches about 6 weeks later. He was discharged to limited duty 83 days after injury, 77 days after operation, with only a slight limp and a foot that had two painless concave scars.



Figure I (Case 3).—Showing dorsum of foot with skin grafted area.

Case 2.—Age 24. This soldier was admitted to the base hospital 22 days after injury. He had sustained a wound of right foot when he fell and accidentally discharged his own M-1 rifle. The injuries as seen on admission were a compound, comminuted, fracture of 2nd and 3rd metatarsals with about 50 per cent loss of bone substance, and a perforating wound of middle of the foot, 10 x 8 cm. on the dorsum, and a previously sutured and healed 10 cm. exit on the plantar surface. On 24 January 1945, 25 days after injury, a further debridement was done and because 50 per cent of the 2nd metatarsal and both tendons to the 2nd toe were found destroyed, the phalange and nail were removed and the skin used as a pedicle graft to partly close the wound of entrance on the dorsum of the foot. About three weeks later, the remainder of the defect was closed with a split skin graft measuring 6 x 3 cm. with a resulting 100 per cent take. Ten days later, a walking cast was applied and protected weight bearing instituted. Six weeks after operation, the cast was removed and weight bearing begun, aided by a specially made stainless steel arch support and crutches. Two weeks later, he was walking with only a moderate limp without crutch or cane. At



Figure 2 (Case 3).—Plantar wound which was secondarily closed.

the end of 12 weeks, the soldier returned to limited duty.

Case 3.—Soldier, age 24, was wounded in action on 2 December 1944. He was received at the base hospital 10 days later with a notation on the chart that an amputation would be needed in the general hospital. Four days later, after penicillin and blood therapy had been initiated, examination in the operating room revealed a compound, comminuted, fracture of the 3rd metatarsal, first cuneiform and cuboid, with a complete avulsion of 2nd metatarsal and 2nd and 3rd cuneiforms. The circulation of the foot appeared good and there was only moderate infection. After all loose fragments and devitalized tissue including the 1st cuneiform and cuboid, were removed, it was possible to close a 6 x 4 cm. wound



Figure 3 (Case 3).—X-rays showing loss of cuboid and all cuneiform bones, all of metatarsal 2nd, and 50% of metatarsal 3rd, with partial fusion at scaphoid and first metatarsal junction.

on the plantar surface of the foot. The 1st metatarsal required fusion to the scaphoid in order to obliterate the dead space. Six days later, the wound was dressed and some additional debridement was found necessary. Seventeen days later, a 10 x 6 cm., split skin graft was placed on the wound on the dorsum of the foot. Eight weeks after the operations, the wounds were completely healed. A walking iron was applied to the cast and he was allowed to walk without crutches. On 23 February 1945, about 10 weeks after operation, his cast was removed and with a specially made arch support in his shoe he began to bear weight on this foot. X-rays at time showed partial fusion. He was walking without discomfort. Three months after operation all wounds remain healed, he is walking with a moderate limp, with no support except the one in his shoe.

Case 4.—This Brazilian soldier was wounded in action by shell fragments on 12 December 1944. Penicillin therapy was initiated and his blood levels brought up to normal by transfusions. On 3 January 1945, soon after admission to our hospital, the following conditions of left foot were found. There was a severe penetrating wound, 10 x 5 cm. on posterior medial aspect of heel, lacerating ⅔ of the tendon achilles and a wound 6 x 2 cm. on posterior lateral aspect previously made for removal of foreign bodies. These wounds were pocketing large amounts of pus. There were also compound, comminuted, fractures of os calcis, and astragalus with loss of ⅓ of the bone substance of the superior aspect of os calcis. At operation the wound on the plantar aspect was enlarged and a complete debridement done. Since the inferior articular cartilage of the astragalus was exposed and comminuted, and since the superior articular surface of os calcis was destroyed, an arthrodesis was carried out as a precaution against sepsis. The wound was not sutured and a long leg cast was applied with the knee flexed 80 degrees. Seven days later the wound was dressed, found to be clean and the plantar wound was sutured. The soft tissue defect was too great to effect a closure, so it was permitted to heal by granulation. Ten weeks later, the wound was completely healed and x-rays showed beginning fusion between the astragalus and the os calcis. Three and one-half months after operation, he was bearing weight with the aid of crutches. Since this fracture of the astragalus was so severe and also extended into the ankle joint, he may require a fusion of the ankle, but a serviceable foot should eventually be obtained.

SUMMARY

Four cases are presented representing the severe injuries of the foot as observed in a base hospital. The results were not as good in all similar cases. However, the results obtained by this method of

management far surpass those achieved by the previously employed conservative measures.

The recommended procedure is as follows: As soon as it is feasible, usually 5 to 10 days post-wounding, with the patient receiving penicillin therapy, and having received adequate blood replacement, at operation all dead and potentially dead tissue is removed, all infected or potentially infected joints are excised and the dead space obliterated. The plantar wound is closed at first operation of reparative surgery if possible. The dorsal wound is left open for drainage if necessary but sutured later if possible. When skin grafting is necessary it is done early and on a depressed rather than elevated area. During treatment the foot is immobilized in plaster of Paris boot.

The advantages that this procedure has over the conservative or closed plaster method are: sepsis is prevented or its chances minimized, thus saving some feet that were previously amputated, and chronic draining sinuses from painful joints are not obtained. Wounds heal much more rapidly keeping scarring to a minimum, which allows early motion and weight bearing and prevents ankylosis of uninvolved joints.

Professional Building.

Floral Eponym (57)

SARRACENIA

SARRAZIN, MICHAEL S., 1659-1736

There seems to be some doubt as to which Dr. Sarrazin Sarracenia is named. Bailey says that Dr. D. Sarrasin of Quebec, a well known physician and naturalist who sent S. purpura to Tournefort nearly two centuries ago, is the man. On the other hand Kelley (Some American Medical Botanists, Troy, N. Y. 1914) quotes from J. B. Tournefort as follows: "Sarracenam appelavi a Clarissimo D. Sarrazin, Medicinae Doctore, Anatomico et Botanico Regio insigni, qui eximiam hanc plantam pro summa qua me complectitur bene volentia e Canada missit." Kelley says further "No initials are given to this Sarrazin and many have assumed that a Dr. Jean Antoine Sarrazin is meant. But Jean Antoine was born in Lyons, France, April 25, 1547 and died there November 29, 1598. As he went out of the world ten years before Tournefort came into it, he manifestly did not send the flower to Tournefort. Michael S. Sarrizin undoubtedly the real sponsor, was born in 1659." He came to Canada in 1685, and several years later was appointed King's physician for the country, the only bearer of that title in all of New France. He also had the honor of being elected to the French Academy.

Sarracinia is a genus of American bog plants. The common name is pitcher plant. They have pitcher-shaped or tubular leaves. The S. purpura, or huntsman's cup, has been vaunted as a cure for smallpox. S. flava, S. drummondii and S. variolaris are Southern species.

COOPERATION BETWEEN OCULISTS AND GENERAL PRACTITIONERS

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The family physician or the pediatrician usually sees the cross-eyed or squinting child before he is referred to an eye man. Too often the advice given is to wait and see if the child doesn't outgrow it in a year or two and, if not, then see an eye specialist. This is especially likely to happen if the squint is only slight. About 25 years ago a mother was given such advice but was not satisfied, so she brought her two year old child in. One glance with the ophthalmoscope revealed a tumor that filled about ½ of the vitreous chamber. The eye was removed the same day and the nerve cut as far back in the orbit as possible. The tumor was malignant but had not metastasized, as evidenced by the fact that she is well today and has two children of her own. I do not mean to suggest that every case of early squint should necessarily be treated in infancy. If the case is one merely of imbalance of ocular muscles there is no reason why we should not temporize, as many of these cases, in fact most of them, outgrow it. But I do want to emphasize the fact that any eye that is blind or that has very poor vision is apt to show some degree of squint, and the squint may be the first sign of a malignant or progressive disease calling for immediate treatment. Another point to bear in mind is that the amount of squint is of little or no importance, as it depends almost wholly on the amount of muscle imbalance. The all-important thing is the presence of some squint, which almost always means that the squinting eye is not being used. If examination shows nothing organically wrong, it is safe to put things off, but every child with any degree of squint deserves an examination rather than a guess.

I have had a number of children referred to me by the family physician for crossed eyes, when it was easy to show that the eyes really were straight. The bridge of the child's nose is usually flat, and if the skin is a little redundant, a fold develops, crescentic in shape, which hides the inner canthus and part of the sclera to the nasal side of the cornea. This is called epicanthus, and gives the appearance of a low degree of internal strabismus. The simplest way to determine that the eyes are straight is for the observer to hold near his own eye a flash-light directed toward the child's eyes. When the child looks at the light, the observer will see a tiny, bright reflection from the child's corneae which will appear to be near the center of the pupils if the eyes are straight. If there is a squint, the reflection from the fixing eye will be in the center of the pupil and the reflection from the squinting eye will occupy some other position. This is easily demonstrated to the parents and will usually satisfy them. As these children grow older the bridge of the nose elevates, gradually drawing the redundant skin away from the inner canthi, allowing the eyes to appear straight. In very excessive cases plastic surgery must be resorted to for cosmetic reasons.

There is another group of children who usually see the ophthalmologist first, but whose treatment should be conducted by the family physician. They are of the scrofulous diathesis, under-nourished, with prominent glands in the neck, whose parents call them "puny" and do nothing about it. When, however, the eyes get red, run water, and are kept closed all the time, they are brought to the eye clinic. These are cases of phlyctenular disease. There have been many theories as to the cause, one of the most attractive being that the patient has become sensitive to some allergen, usually tuberculous toxin, and when some of the allergen gets into the eye, phlyctenules develop. They have been produced experimentally in that fashion. The phlyctenules are little raised, yellowish nodules in the epithelium about the size of a pin-head or smaller, surrounded by a red zone, usually multiple, showing a predilection for the limbus. Regardless of the cause, we know that we can make them melt away in short order by dusting a little powdered calomel in the eyes once a day, but this treatment does not prevent rapid recurrences. The real treatment used to consist in cod-liver-oil, balanced but abundant diet which limited candy and pastries severely, fresh air and sunshine. I doubt if more modern methods are any more effective.

Another condition that we not infrequently encounter is intraocular tuberculosis. Strangely enough this is usually found in apparently robust individu-

als in good health and is almost never seen in people with pulmonary tuberculosis or in inmates of t.b. sanitaria unless the tuberculosis is of the miliary type. It is usually seen as a chorio-retinitis, and in early cases the area involved is smaller than the optic disk or nerve-head. The diagnosis can be made by the ophthalmoscopic appearance, high sensitivity to the intradermal or patch tuberculin test, focal reaction to tuberculin, and its chronicity. It is quite refractory to simple foreign protein injections but soon begins to resolve under properly graded tuberculin therapy. I am fully aware that practically all modern internists scoff at tuberculin as a therapeutic agent. I am equally aware that many, if not a large majority of our most astute ophthalmic clinicians consider tuberculin as our sheet anchor in such cases. Why does it work in ocular tuberculosis and not in tuberculosis located elsewhere? I have never heard a thoroughly satisfactory answer, but in thinking it over an idea occurred to me which you may take for what it is worth. In the eye the lesion is open to clear inspection, whereas in the lungs or peritoneum it is covered with integument and many centimeters of tissue. In the eye a very small lesion will render the affected portion of the retina blind, thus bringing the condition to notice almost at its inception in contrast with the delay usual when it attacks other organs. With the ophthalmoscope we get an effective magnification of 14 diameters, so that the average lesion seen early will really be a flat disk about one millimeter in diameter and about as thick as a piece of paper. A chest lesion that the internist would consider early would be about the size of a black-eyed pea, the volume of which would be a thousand times that of the early ocular lesion. The infinitesimal amount of tubercular toxin liberated by the tiny ocular lesion is inadequate to stimulate the general body defense against the infection, so the administration of the toxins by "hypo" in proper dosage is used to stimulate the defense mechanism. Even a slight over-dose has a very deleterious effect on the lesion, but we can watch the lesion in the eye constantly and reduce the dose drastically at the first unfavorable sign. In the case of the chest lesion, which is probably several thousand times greater in volume, there is doubtless more tuberculous toxin liberated into the blood-stream than is needed to stimulate general defense, and the patient is having at all times a result that is comparable to the results we get in ocular tuberculosis when too much tuberculin is injected. Obviously in such a case the administration of tuberculin would be adding insult to injury. Furthermore, if all of the above is in error and if tuberculin in guarded dosage would be beneficial in pulmonary tuberculosis, the fact still remains that the internist cannot watch his lesion with sufficient accuracy to detect the first signs of an over-dose, and probably his first indication would be a general reaction to the tuberculin, which never comes until after considerable damage has been done by the tuberculin injected. So, for my part, I am willing to have the internists abandon tuberculin for therapy, and to have the oculists continue to save eyes by its use, and I believe each is right in his own field. My chief point is that in a case of ocular tuberculosis, the internist should not take over the administration of tuberculin but should insist that the oculist do it so that the lesion can be diligently observed throughout the whole course of treatment, which usually takes several months for primary desensitization, and periodic booster doses for an indefinite time, probably for life.

One of the dreaded fundus pictures that we see shows white or yellowish spots, small flame-shaped or round hemorrhages and retinal edema. The most frequent causes are vascular disease, renal disease and diabetes. A great deal of work has been done in an effort to classify the degree of retinal involvement in cases of hypertension, but I believe the results are rather fine-spun and are of more theoretical interest than practical value. I have seen as many as three grades of involvement shown in different vessels of the same retina, and not infrequently there is a marked difference in the vessels of the two eyes, so we have to guess which picture gives the truer index of the condition prevailing in the vascular tree generally. Certain features of the retinopathy described may be more prevalent in nephritis, and others may be more often found where diabetes is the cause. A case of diabetic retinopathy in a mildly arteriosclerotic individual may present a picture indistinguishable from albuminuric retinitis; also, some cases of malignant hypertension may go to an advanced stage before there is much retinal evidence of disease. Certainly the internist can diagnose diabetes, nephritis and hypertension with greater ease than the ophthalmologist, his prognosis will be more accurate, and the management of the

condition is his in the first place. I don't mean to minimize the importance of retinal examinations, but I do believe that their chief value is in the fact that often the first complaint concerns the eyes, and the retinal picture gives us the first clue that something is seriously wrong. Exhaustive study of the fundus to arrive at a differential diagnosis is largely a waste of time, when the desired information may be so easily obtained by a blood and urine examination.

Retro-bulbar neuritis has been described as a disease having one symptom and no signs, the patient seeing little and the doctor seeing less. The peripheral fields of vision may be normal, but there is a central scotoma so that the patient sees everything except what he tries to look at. Nothing can be found wrong in the eye by objective examination. Usually there is a marked improvement, and frequently complete recovery in a few weeks. My reason for bringing this disease to your attention is that it is caused by multiple sclerosis in about 75 per cent of the cases, often antedating any other symptom by as much as ten years. In a series of over five hundred proven cases of multiple sclerosis, about 50 per cent of them gave this sort of attack as the earliest symptom noted. It would be a mistake to assume that any given case is retrobulbar neuritis just because there is a central scotoma. Similar scotoma may be caused by toxic amblyopia, macular hemorrhage, central chorio-retinitis, angiospasm and even senility, but when these are ruled out such patients should be given a guarded prognosis and should be referred to the neurologist.

Opaque nerve fibres in the retina present a picture that is startling to one not doing routine ophthalmoscopy. In the orbit the optic nerve is nearly twice as large as it is where it pierces the choroid, due to the fact that in the orbital portion each nerve fibre is coated or insulated by its myelin sheath, and this sheath ends abruptly where the nerve pierces the sclera. So the nerve-fibres within the eye are naked and transparent. Sometimes a small bundle of fibres retain their sheaths after entering the eye, producing a white patch of variable extent, usually adjacent to the disk, and at the edge of this patch fine radial striations may be seen. This might easily be mistaken for exudate, and, conversely, a patch of exudate might be thought to be opaque fibres, so if there is any doubt, it should be passed on by an ophthalmologist. The condition is developmental, not progressive, causes only an enlargement of the blind spot, and treatment is not indicated or possible.

These have been merely some rambling remarks about some of the commoner conditions that call for coöperation between the oculist and the general practitioner. I have said what I thought should or should not be done in each case. In the following I don't know just what should be done, and I am asking you, especially the general practitioner to advise me. The problem is one of professional ethics.

In every city there are a few physicians who do not keep up with modern advances in medicine but continue to practice the brand of medicine they were taught at school. If such a one should refer a patient to me, and I should find an ocular condition which indicated a meticulous physical and clinical work-up, should I refer such a case back to him for work that I know is beyond his ability? If I do refer him back, I have not given the patient the best advice, and if I refer him elsewhere I have not been square with the doctor, and have doubtless made an enemy for life.

315 Medical Arts Building.

Schering Wins Advertising Honors.

The direct mail advertising of the Schering Corporation of Bloomfield and Union, N. J., has recently been awarded the "Best of Industry" prize by the Direct Mail Advertising Association, which has in the past six years consistently honored Schering as one of the "50 Direct Mail Leaders" of the country. Announced at the group's annual convention at Cleveland, Ohio, the selection of Schering's promotional campaign for the past year is in recognition of the effective force of the Company's direct mail program of information for the medical profession. Artistic excellence, quality production and high calibre of copy have marked the Schering service as outstanding for almost a decade.

MEDICAL PUBLIC RELATIONS*

HENRY S. JOHNSON,
Director, Public Relations and Medical Service, Medical Society of Virginia,
Richmond, Virginia.

It is assumed that every member of the Medical Society of Virginia is interested in Medical Public Relations. Perhaps such questions as the following are being discussed by many of you.

First, what is Medical Public Relations? What is its program in Virginia? What has it undertaken? What it its future program in our State and how can the local society and individual doctor assist in facilitating this?

Public Relations refers to those things that take place or exist between, or among, two or more parties. An opinion held, an attitude developed, an event or an activity; any or all of these may be effected by Public Relations. Boiled down, so to speak, it may be said that approval or disapproval and acception or rejection are perhaps of paramount concern in Public Relations. Another way of expressing it might be the focusing of any divergencies in points of view. These opinions, attitudes, activities or events can be good or bad, desirable or undesirable.

Of all the things that Public Relations may be said to be we can point to one thing that it certainly is *not,* that is PUBLICITY.

I have tried to study Philosophies of Public Relations and am of the opinion the Public Relations Program that is confined to PUBLICITY is a short-sighted one that will not pay long term dividends. Our concern in Medical Public Relations is not confined to the attitude of the Public toward the doctor, but also of the doctors of Medicine toward the public. And incidentally, we are also interested in professional relations. That is to say, the relationship between, and among, the Doctors of Medicine.

The ramifications of our civilization are so complex, affected by so many organized forces and subject to such constant change, that it may be unwise for any agency or professional group not to be concerned over the relationship it enjoys with those whom it serves.

This should not be construed to even imply that the merits of any Doctor should be advertised. But, Doctors of Medicine have accomplished too much in medical science, and have rendered too much service to humanity, to permit that the medical profession of our day be misunderstood, or that they not be understood by those served, by those who pay the bills, and even by those who influence the laws affecting our health and medical care. It seems to follow that a real responsibility exists to explain to the public the merits of our present system of health and medical care and the demerits of any Health and Medical Care Program that is controlled by laymen or politicians.

If our present system of medical care or our Medical Profession are not understood by any segment of the public today, it is not because of wilful neglect, or because of medical indifference, but perhaps more because of a matter of preoccupation on the part of the physician in the practice of his profession. As we listen to lay opinions, observe articles in publications, or look in the direction of our National Government headquarters, we believe one can sense a greatly increased interest in matters of health and medical care. It might also be said that the public individually and through organized segments are expressing more freely their views on this matter and indeed showing some initiative in proposing a system that is preferred, at least by some, to our present one.

We believe that the interests of those who would like to change our present system of health and medical care have become so well organized and so well represented by personnel and dollars that the time has arrived, if the hour is not indeed late, for those responsible for our present system of medicine to take cognizance of their responsibility in the retention and still further development of the system of medical care that will unquestionably serve the best interests of our people. Mere acquiescence, or simply the adoption of resolutions, is not sufficient. We have indicated that Public Relations should be a positive influence. If it is to be successful, the active support of our State organization, Local Medical Societies, the Women's Auxiliary to the

*Read at the annual meeting of the Medical Society of Virginia in Roanoke, October 13, 1947.

Medical Society, and that of every individual Doctor of Medicine is needed.

I shall at least not make the mistake of underestimating the power, the leadership, and the influence that our Medical Profession possesses. Although some of these assets may have lain much too dormant in the past they are truly potentially great and should be awakened and directed into active and constructive channels. There is ample evidence that this can be done and in such a manner as to constitute good Public Relations.

As we observe the trends of programs and activities of Medical Public Relations in this country, we believe that the Medical Society of Virginia is to be congratulated on the place this subject is being given in the interest, activities and support of the membership of our Medical Society. We, in Virginia, are young in this undertaking and do not claim the only program, or the best program of any State in the Union, but you do have reason to feel proud of the beginning you have made in an approach to a sound program. This we should refer to only as a means of encouragement to the end that our people shall have more and better medical care under our present system.

As we think of some of our activities we should keep in mind that your program is recommended by your Public Relations Committee and endorsed by your Council and House of Delegates; that your policy, and in so far as is possible, the content is studied carefully by your Public Relations committee, or authorized agency of the Medical Society, and checked by your Medical Censorship Board, consisting of five outstanding members of your Society. I do not hesitate to recommend the continuation of this procedure.

If time permitted I should be glad to discuss with you more in detail some of the activities of your Public Relations such as:

1. Meetings with Local Medical Societies, their work and suggestions they have made
2. The office of the members of the District Council and their work
3. Veterans Medical Care Program
4. Our interest in Legislation State and Federal
5. Compiling a list of Doctors in Virginia
6. Our Radio Program
7. Our relationship with the Press
8. Our Plans for the Future and
9. Some of our problems

Many of these things are brought to your attention through your Journal and we hope that each of you will devote at least a few minutes of your time while you are here at our little Exhibit with the view of indicating what literature you would like and give us any suggestions for the improvement of the Exhibit.

I should like to thank the President of the Medical Society of Virginia, your program committee, and any others who helped in affording me the opportunity of this appearance and to assure each of you that I am deeply conscious of the assistance you can give the Public Relations Committee and my office in the future.

If I were to leave one recommendation with you it would perhaps be to the effect that each Local Medical Society, each Councilor, each member of the District Council and each member of the Medical Society of Virginia and the Woman's Auxiliary view this whole matter of Public Relations as a personal responsibility and challenge to each of us.

If I were to make a prediction it would perhaps be that your program will be only as successful as you want it to be and will be only as effective as you are willing to organize for, and carry on thru the grass roots activities of your local Medical Societies.

And if I had a wish, as we turn a century of medicine in this country, it would be that the doctors of this great land of ours who have passed on might know of the gratitude in the hearts of our people for the development in medical science and the unparalleled humanitarian service rendered by doctors of medicine who loved their profession and who were devoted to its cause.

CORRESPONDENCE

Infectious Hepatitis*

TO THE EDITOR:

I practiced in China and there was an infectious liver trouble, the same or similar to the one reported in the October MONTHLY.

The effect on pregnant women is not mentioned. *Every pregnant woman died of hemorrhage.* Ten died in one small village—treated oriental fashion—but treated along western lines, I had five cases and all lived. The Chinese said it was the Lord's blessing and no doubt it was.

ANNE HOUSTON PATTERSON, M. D.
R.F.D. 2,
Staunton, Virginia
October 16, 1947.

*Infectious Hepatitis. M. M. Pinckney, M.D., J. O. Burke, Jr., M.D., W. T. Thompson, M.D., and H. St. Geo. Tucker, M.D., Richmond, Va., *Virginia Medical Monthly* **74**:443-447, October, 1947.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President ..... MRS. J. L. DECORMIS, Accomac
President-Elect ..... MRS. R. M. REYNOLDS, Norfolk
Recording Secretary ..... MRS. M. H. HARRIS, West Point
Corresponding Secretary MRS. HOLLAND TROWER, Eastville
Treasurer ..... MRS. REUBEN SIMMS, Richmond
Parliamentarian ..... MRS. E. LATANE FLANAGAN, Richmond
Historian ..... MRS. H. A. LATANE, Alexandria

The Auxiliary to the Northern Neck Medical Society

Met on October 23rd at Tides Inn, Irvington, with a large attendance. Mrs. Paul Pearson, who has served as president for two years, welcomed two new members, making a total membership of eighteen.

Mrs. A. B. Gravatt, Jr., gave a full report as delegate to the State meeting held in Roanoke. The group then had the privilege of having Mrs. P. Moncure Chichester of Richmond as guest speaker.

Preceding lunch, Mrs. Lee Liggan recited the poem, "Welcome to the Northern Neck".

During the afternoon session, Mrs. R. E. Booker was installed as the new president. Many of the ladies remained for the banquet as guests of the doctors.

MRS. V. L. LITSINGER,
Editorial Chairman.

The Auxiliary to the Northampton-Accomac Medical Societies

Held its Fall meeting on October 22nd, at the home of Mrs. H. L. Denoon at Nassawadox, with Mrs. E. W. P. Downing as co-hostess. There was an attendance of eighteen members and one guest. A delightful luncheon preceded the business meeting, at which the President, Mrs. B. N. Mears, presided. Minutes of the April meeting, the treasurer's report, and an account of the July picnic at Silver Beach were given, and notes were read from principals of the Northampton and Accomac High Schools, thanking for the gift subscriptions to "Hygeia". The president then gave her yearly report, and expressed appreciation to Mrs. J. L. DeCormis, for her help and the interesting reports she had given from other auxiliaries. Mrs. Mears then turned the meeting over to the new president, Mrs. S. K. Ames of Cape Charles, who gave an interesting account of the State meeting.

The Nominating Committee reported the following officers for the coming year: President, Mrs. S. K. Ames, Cape Charles; vice-president and president-elect, Mrs. W. J. Sturgis, Sr., Nassawadox; treasurer for two years, Mrs. J. Fred Edmonds, Accomac; secretary, Mrs. Charles T. Garcia, Cape Charles; recording secretary, Mrs. Holland Trower, Eastville.

The meeting then adjourned to meet in January at the home of Mrs. J. Fred Edmonds in Accomac.

CATHERINE R. TROWER
(MRS. HOLLAND)
Chairman, Press and Publicity.

PROCEEDINGS
MEDICAL SOCIETY OF VIRGINIA

ANNUAL MEETING
Roanoke
October 13, 14, and 15, 1947

The Medical Society of Virginia held its 100th meeting at Hotel Roanoke, Roanoke, Virginia, on Monday, Tuesday and Wednesday, October 13, 14 and 15, 1947, under the presidency of Dr. William L. Powell of that city. There was a registered attendance of five hundred and eighty-four doctors, one hundred and seventy-one ladies, and eighty-six technical exhibitors. In addition to several business sessions, there was a general session on Monday evening, and six scientific sessions. Social features added to the enjoyment of the meeting.

Scientific Sessions

Section A

Monday, October 13

Section A of the Medical Society of Virginia met in the ballroom of Hotel Roanoke, on Monday afternoon, October 13, beginning at two forty-five o'clock. Vice-President A. B. Hodges of Norfolk called the meeting to order and presided.

The first paper, on "The Psychosomatic Effects of Chronic Invalidism" (illustrated by lantern slides), was read by Dr. David C. Wilson of Charlottesville. Dr. Walter B. Martin of Norfolk opened the discussion which was closed by Dr. Wilson.

Dr. John F. Williams of Richmond read his paper entitled "Practice of Psychosomatic Medicine", which was discussed by Dr. R. C. Siersema, Richmond, and in closing by Dr. Williams.

Dr. Homer E. Ferguson, Richmond, read his paper entitled "The Use of Vitamin E in Menopausal Syndrome", which was discussed by Dr. John F. Williams of Richmond.

The paper of Drs. James B. Black, Jr., J. Warrick Thomas, W. Randolph Graham, and DuPont Guerry, III, of Richmond, on "Varied Allergic Reactions to Penicillin" was read by Dr. Thomas and was discussed by Dr. Oscar Swineford of Charlottesville.

Dr. W. Ambrose McGee, Richmond, read his paper entitled "Advantages of Indirect Skin Tests for Young Allergic Children". This was discussed by Dr. Leta J. White of Petersburg.

Dr. J. W. Love, Alexandria, read his paper entitled "The False Positive Serological Test". This paper was discussed by Dr. E. E. Barksdale, Washington, D. C., and by Drs. D. C. Smith of Charlottesville, R. D. Kimbrough of Richmond.

The program having been completed, the afternoon session adjourned.

Section B

Monday, October 13

Section B of the Society met in Parlor B of Hotel Roanoke at 2:30 p.m. on Monday, October 13, with Dr. W. L. Powell presiding.

The first paper on this program was one on "Results of Vagotomy" by Dr. S. D. Blackford and Dr. Alexander McCausland of Charlottesville.

Dr. Guy W. Horsley of Richmond presented the next paper, entitled "The Treatment of Peptic Ulcer", which was discussed by Dr. R. L. Payne of Norfolk and Dr. S. D. Blackford of Charlottesville.

A paper on "Diagnosis and Treatment of Diverticulitis of the Colon" by Drs. Carrington Williams, Sr. and Jr., of Richmond, was presented by Dr. Williams, Jr., and was discussed by Dr. Ben Rawles of Richmond and by Dr. Williams, Sr., in closing.

Dr. Herbert C. Lee of Richmond next read his paper on "The Use of Early Rising and Early Ambulation Following Surgical Operations", illustrated by lantern slides. This was discussed by Dr. C. Bruce Morton of Charlottesville, Dr. E. T. Trice of Richmond, Dr. Hugh H. Trout of Roanoke, and by Dr. Lee in closing.

"Roentgen Therapy and Bursitis" by Dr. Fred M. Hodges and Dr. Randal A. Boyer of Richmond was the next subject presented, and this was discussed by Dr. J. L. Tabb, Richmond, Dr. Claude Moore, Washington, D. C., Dr. J. H. Selby, Alexandria, and in closing by Dr. Boyer.

The last paper on the program was by Dr. Donald S. Daniel, Richmond, on "Thrombosis of the Deep Veins of the Lower Extremity". This was discussed by Drs. Wellford Reed, Richmond, J. Bolling Jones, Petersburg, and E. T. Trice of Richmond.

Adjournment followed.

General Session

Monday, October 13

The first general session of the Medical Society of Virginia was held in the ballroom of the Hotel Roanoke, beginning at 8:30 P.M., Monday, October 13, 1947.

Dr. Frank A. Farmer of Roanoke, Chairman of the Committee on Arrangements, called the meeting to order, and Reverend Harry Y. Gamble of that city pronounced the invocation.

CHAIRMAN FARMER: I speak as only one member of the Roanoke Academy of Medicine when I say it is a pleasure to have the meeting of the Medical Society of Virginia here. It has always been a pleasure and an honor to have these medical gatherings in Roanoke.

The Medical Society of Virginia was organized in 1820 and had its first meeting in 1821. Many years passed without meetings, due to wars and other causes, and this is the one-hundredth annual meeting. At the end of this session there will be a birthday party in the other end of this hall. Miss Edwards, our Executive Secretary, has gotten together photographs of quite a number of the men who have served as president down through the years and has them on display just outside this hall.

(Dr. Farmer then made some announcements about the entertainment features of the program and about the exhibits.)

CHAIRMAN FARMER: During the twenty-five years that I have been attending the meetings of this Society, one man, to my knowledge, has never missed a meeting. He has at one time or another served on every committee and in every office, appointive or elective. In other words, whenever there was real work he was selected to do it and in my opinion he has done more work for this Society than any other man in the membership. I have the honor of presenting to you Roanoke's own Dr. William L. Powell, President of the Medical Society of Virginia.

PRESIDENT POWELL: Dr. Farmer, distinguished guests, ladies and gentlemen, I feel deeply honored in being the presiding officer of the Medical Society of Virginia at this its one-hundredth meeting.

Dr. Powell then read his Presidential Address.

PRESIDENT POWELL: It is our custom at each meeting of the Medical Society of Virginia to have a memorial hour in which the names of those who passed on during the previous year are read. I call now on Dr. B. E. Harrell of Norfolk to conduct our memorial hour.

DR. B. E. HARRELL, Chairman Membership Committee, Norfolk: Ladies and gentlemen, as a tribute to the memory of the members of the Medical Society of Virginia who have passed on since our meeting in 1946, we present their names and the dates of their passing. There are thirty-eight names in this list, and I ask you now to stand while they are read. They are as follows:

MEMBERS WHOSE DEATHS HAVE BEEN REPORTED SINCE 1946 MEETING

Dr. William C. Stephenson, Jr., Roanoke, October 3, 1946.
Dr. Claudius James Riddick, Suffolk, October 18, 1946.
Dr. William Preston Burton, Covington, October 20, 1946.
Dr. John P. Haller, Salem, October 24, 1946.
Dr. Oscar Winfred Carper, Front Royal, October 26, 1946.
Dr. Robert Edward Timberlake, Richmond, October 27, 1946.
Dr. William Oscar Pollard, Speers Ferry, October 28, 1946.
Dr. James Henry Deyerle, Harrisonburg, November 26, 1946.
Dr. Charles R. Vance, Bristol, November 26, 1946.
Dr. Lewis Holladay, Orange, December 10, 1946.
Dr. Flavius Ogburn Plunkett, Lynchburg, December 18, 1946.
Dr. George Franklin Simpson, Purcellville, December 24, 1946.
Dr. Reginald Munson, Linden, December 29, 1946.
Dr. John William Preston, Roanoke, January 1, 1947.
Dr. Joseph Albert Abercrombie, Richlands, January 11, 1947.
Dr. Thomas Benjamin Pearman, Richmond, January 12, 1947.
Dr. Robert Lawrence Mason, Roanoke, January 15, 1947.
Dr. James Alexander Grizzard, Drewryville, January 28, 1947.
Dr. Oscar Hunter McClung, Lexington, February 2, 1947.
Dr. William Seddon Cox, West Point, February 11, 1947.
Dr. William Miller Holman, Lee, February 22, 1947.
Dr. John Edward Hamner, Petersburg, February 24, 1947.
Dr. John Aldridge Gibson, Leesburg, March 9, 1947.
Dr. Max Schoenbaum, Richmond, March 28, 1947.
Dr. James John Bishop, Ivanhoe, March 30, 1947.
Dr. William Clyde West, Alexandria, April 1, 1947.
Dr. Henry Rolfe DuPuy, Winchester, May 3, 1947.
Dr. Otis Hillsman Whitlock, Richmond, May 9, 1947.
Dr. Alfred D. Henkel, Winchester, May 27, 1947.
Dr. Jesse Hill Crouch, Richmond, June 13, 1947.
Dr. Hugh Page Newbill, University, June, 1947.
Dr. Carroll Harris Fowlkes, Richmond, July 6, 1947.
Dr. William Thomas Potter, Norfolk, July 17, 1947.
Dr. William Harvey Bruce, Dungannon, July 27, 1947.
Dr. Claude Bernard Bowyer, Stonega, July 29, 1947.
Dr. James Henry Ferguson, Clifton, August 1, 1947.
Dr. Walter Ashby Plecker, Richmond, August 2, 1947.
Dr. Tiffany Johns Williams, University, August 19, 1947.

The assembly stood in silence while the names of the deceased members were read.

PRESIDENT POWELL: Next on our program is a very distinguished Virginian who is Professor of Clinical Medicine at the Medical College of Virginia. He is the editor of three volumes of the "History of Medicine in Virginia", and the author of a book on Physical Diagnosis, a book on Allergy, and of a volume on "Making a Downtown Church". Dr. Wyndham B. Blanton of Richmond will now speak to you on "1820—The Virginia Doctor and His Times".

Dr. Blanton read his paper on the above-named subject.

PRESIDENT POWELL: We are fortunate in having another distinguished guest who was formerly Professor of History at Duke, with a leaning towards medical subjects, especially medicine in the old South. At present Dr. Shryock is Professor of History at the University of Pennsylvania. He is the author of a well-known volume on "History of Medicine" and is the President of the American Association of the History of Medicine. There was a Shryock connected with the early history of Transylvania College, but whether he was an ancester of our guest I know not. I take pleasure in introducing Dr. Richard H. Shryock of Philadelphia.

Dr. Shryock addressed the Society on the subject of "Progress of Medicine in America in the Past One Hundred Years".

PRESIDENT POWELL: I mentioned in my report, earlier in the evening, that we have an efficient Director of Public Relations, Mr. Henry S. Johnson. Mr. Johnson will now address us.

Mr. Johnson read his paper on "Medical Public Relations".

President Powell presented the Past Presidents of the Society who were sitting on the platform, and the meeting then adjourned to enjoy a birthday party and a social hour.

Scientific Sessions
Section A
Tuesday Morning, October 14

Section A of the Medical Society of Virginia met in the ballroom of the Hotel Roanoke on Tuesday, October 14, and was called to order at 9:10 A.M. by Dr. W. A. Porter of Hillsville, Councilor for the Fifth District, who presided as chairman.

Dr. W. C. Winn of Richmond read his paper entitled "The Clinical Significance of the Rh Factor" (illustrated by lantern slides).

A paper on "Hemolytic Anemia in the Newborn" (with lantern slides) was read by Dr. Edwin L. Kendig, Jr., of Richmond.

The papers of Dr. Winn and Dr. Kendig were discussed by Dr. J. H. Scherer, Richmond, and Mr. Robert Waller, of Medical College of Virginia.

Dr. John S. Weitzel, Richmond, read his paper entitled "Tetanus Neonatorum" (illustrated by lantern slides), which was discussed by Dr. Lee E. Sutton, Jr., of Richmond.

Dr. F. N. Mullen, Jr., Norfolk, read his paper entitled "Factors in Pregnancy Affecting the Newborn", and this was discussed by Dr. Lee E. Sutton, Jr., Richmond, Dr. C. P. Jones, Newport News, Dr. W. Ambrose McGee, Richmond, and in closing by Dr. Mullen.

(During the reading of this last paper Dr. A. B. Hodges, Norfolk, Vice-President, took over as presiding officer.)

The paper of Drs. Lee E. Sutton, Jr., and Harry Y. Spence of Richmond, entitled "The Nutritional Management of the Nephrotic Syndrome" (illustrated by lantern slides), was read by Dr. Spence and was discussed by Dr. H. St. George Tucker, Richmond, and Dr. Basil B. Jones, Richmond.

The paper of Dr. Thomas W. Murrell, Jr., and Dr. Emily Gardner of Richmond, entitled "Infantile Eczema in General Practice", was read by Dr. Murrell and was discussed by Dr. J. Warrick Thomas, Richmond, and Dr. W. Ambrose McGee, Richmond.

Its program having been completed, Section A then adjourned to meet in a general session at twelve o'clock to hear one of the guest speakers. Dr. Powell, president, presided.

PRESIDENT POWELL: We are fortunate in having a very distinguished guest speaker at this time, Dr. W. Halsey Barker of Baltimore, who is a worthy son of a worthy sire. He is Assistant Dean at the Johns Hopkins Medical School and an Assistant Professor. I take pleasure in introducing Dr. Barker, who will speak at this time on "Gastro-Intestinal Symptoms Occurring in Disorders Located Outside of the Gastro-Intestinal Tract".

Dr. Barker then read his address.

Following this, the general session adjourned, at twelve-fifty P.M.

Section B
Tuesday, October 14

Dr. A. B. Hodges, vice-president, presided over this Section at its meeting on Tuesday, October 14, starting at 9:00 a.m.

The first paper on the program was one on "Tic Douloureaux: Review of 200 Cases Treated by Surgery", by Drs. C. C. Coleman, J. M. Meredith, and C. E. Troland of Richmond. This was illustrated by lantern slides.

Dr. Fletcher D. Woodward of Charlottesville presented the next paper—"The Significance of Paralysis of the Larynx", illustrated by lantern slides. Dr. C. T. Burton of Roanoke discussed this paper.

A Paper on "Thyroid Surgery", illustrated by lantern slides, was next presented by Drs. J. W. Devine, Sr., and Jr., of Lynchburg, and it was discussed by Dr. Hugh H. Trout, Jr., Roanoke, Dr. R. L. Payne, Norfolk, Dr. Kinloch Nelson, Richmond, and Dr. T. J. Hughes, Roanoke.

"Hemorrhagic Disorders: Diagnosis and Treatment" by Drs. Byrd S. Leavell and Howard P. Holt of Charlottesville was next read. The discussion was opened by Dr. J. R. Beckwith of Clifton Forge, who was followed by Dr. E. P. Lehman of Charlottesville, and by Dr. Holt in closing.

Dr. J. A. Shield of Richmond read the next paper, entitled "The Diagnosis and Treatment of Neurosyphilis with Negative Blood and Spinal Fluid". This was illustrated by lantern slides and discussed by Dr. Harry Brick of Richmond.

This Section then adjourned to attend the general session at which Dr. W. Halsey Barker was the guest speaker.

Scientific Session
Tuesday Afternoon, October 14
2:30 P.M.

The Medical Society of Virginia met in the ballroom of the Hotel Roanoke with Dr. A. B. Hodges, Vice-President, presiding.

Dr. William H. Harris, Richmond, read his paper entitled "Progress Report of the Cooperative Study of Streptomycin in Clinical Tuberculosis" (with lantern slides), which was discussed by Dr. George A. Welchons, Richmond.

The paper of Drs. Dudley C. Smith and Robert F. Thompson of Charlottesville, entitled "The Management of Early Syphilis" (illustrated by lantern slides), was read by Dr. Smith and was discussed by Dr. W. W. S. Butler of Roanoke.

(During the reading of the last-named paper, President William L. Powell took the Chair.)

President Powell spoke as follows "Gentlemen, we are very fortunate in having with us a distinguished guest who is head of the Surgical Department of the University of Michigan at Ann Arbor, and who will now speak to us on 'Peripheral Vascular Diseases and Newer Concepts of their Management' ".

Dr. Coller gave an illustrated address on the above-named subject.

The President thanked Dr. Coller for his splendid ad-

dress, and then Dr. Hodges resumed the duties of chairman.

The paper of Drs. William A. Read and Russell Buxton of Newport News, entitled "Gout Simulating Rheumatoid Arthritis" (with lantern slides), was read by Dr. Read and was discussed by Dr. Buxton.

Dr. William R. Jordan, Richmond, read his paper entitled "Pregnancy and Diabetes", which was discussed by Dr. Waverly R. Payne of Newport News.

The paper of Dr. Chester D. Bradley and Miriam D. Bradley, R. N., of Newport News, entitled "Medical Practice on the Virginia Peninsula Sixty Years Ago", was read by Dr. Bradley and was discussed by Dr. M. P. Rucker, Richmond.

The program having been completed, the afternoon session then adjourned, at five-thirty P.M.

Scientific Session

Wednesday Morning, October 15

The Medical Society of Virginia met in the ballroom of the Hotel Roanoke on Wednesday morning, October 15, for its final session and was called to order by the President, Dr. William L. Powell.

The paper of Drs. Allen E. LeHew and Julian R. Beckwith of Clifton Forge, entitled "Review of 100 Cases of Coronary Thrombosis with Myocardial Infarction" (illustrated with lantern slides), was read by Dr. Beckwith and was discussed by Dr. J. Edwin Wood, Jr., of Charlottesville and Dr. Oscar Swineford, Charlottesville, and in closing by Dr. Beckwith.

The paper of Drs. A. J. Crutchfield, Jr., and J. Edwin Wood, Jr., of Charlottesville, entitled "The Role of Ammonium Chloride and Other Acid-Producing Substances in the Treatment of Congestive Heart Failure" (illustrated with lantern slides), was presented by Dr. Crutchfield and was discussed by Dr. R. Earle Glendy of Roanoke and Dr. Paul D. Camp of Richmond.

Dr. R. Earle Glendy of Roanoke read his paper entitled "Rheumatic Disease in Southwestern Virginia" (with lantern slides), which was discussed by Dr. William M. Moir, Roanoke.

A paper entitled "The History—An Important Factor in Diagnosis of Coronary Thrombosis" was read by Dr. Ernest L. Copley, Richmond, and was discussed by Dr. Paul D. Camp of Richmond.

Dr. K. D. Graves, Roanoke, read his paper on "Treatment of Bronchial Asthma" (illustrated by lantern slides), which was discussed by Dr. Oscar Swineford, Charlottesville, and by another member and in closing by Dr. Graves.

The paper of Drs. Reno H. Porter and Nathan Bloom of Richmond, entitled "The Practical Application of Unipolar Leads in Clinical Electrocardiography" (with lantern slides), was read by Dr. Porter and was discussed by Dr. R. Earl Glendy, Roanoke.

President Powell presented Mr. Frank E. Smith, Director Associated Medical Care Plans, American Medical Association, Chicago, Illinois, who gave a most interesting talk on "The Doctor Assumes a Moral Responsibility".

PRESIDENT POWELL: The time has come for the parting of the ways. Will Dr. Robertson and Dr. Farmer assist the incoming President, Dr. Guy R. Fisher, to the rostrum?

Dr. Fisher, I congratulate you upon assuming this office. You have a fine council and a fine Executive Secretary. It is a great pleasure for me to turn over this gavel to much more efficient hands. I present Dr. Fisher.

DR. GUY R. FISHER, Staunton, President: President Powell and fellow members, I am deeply grateful for this great honor which you have bestowed upon me and of which I am so unworthy. I enter upon my task as President of this Society considering it not an onerous duty but a high privilege to serve you as best I can. This year this organization shall not be an "I" medical society but a "we" cooperative effort. I covet your counsel, your support, your cooperation; and in my tenure of office I assure you everything I do I hope will be predicated upon the beautiful principles of the Sermon on the Mount. My fellow members, I trust that when the sun shall set upon my administration the Medical Society of Virginia, with your help, shall have had higher achievements, shall have had greater accomplishments than ever before, and that it shall be a year of the most cohesive, most cooperative effort in our history, and that we shall see the fruition of all the ideals we hope to attain in the practice of medicine. I thank you.

It is the law of the Society that the President appoint new members of the standing committees, and that now becomes my pleasant duty. As you will see from the JOURNAL, a number of the committeemen will continue to serve, because the tenure of office is from one to three years. I shall now read only my appointments and leave for further publication in our JOURNAL the full committees.

There being no further business, the Medical Society of Virginia adjourned at 12:45 p.m., October 15, 1947, *sine die*.

Standing Committees

(Numbers after names indicate length of term of office, as the By-Laws provide that new members of Standing Committees shall be named by the incoming President for terms of three years, except in the case of the Department of Clinical and Medical Education.)

PUBLICATION AND PROGRAM: M. P. Rucker, M.D. (1), Richmond, *Chairman;* Wyndham B. Blanton, M.D. (2), Richmond; Alex. F. Robertson, Jr., M.D. (3), Staunton.

SCIENTIFIC EXHIBITS AND CLINICS: V. W. Archer, M.D. (2), University, *Chairman;* W. Ambrose McGee, M.D. (3), Richmond; H. F. Dormire, M.D. (1), Virginia Beach.

DEPARTMENT OF CLINICAL AND MEDICAL EDUCATION: W. L. Powell, M.D., Roanoke, *Chairman;* George B. Zehmer, Richmond, *Executive Secretary;* L. J. Roper, M.D., Richmond, State Health Commissioner; S. D. Blackford, M. D., University of Virginia, Charlottesville; C. M. Caravati, M.D., Medical College of Virginia, Richmond; James W. Love, M.D., Alexandria; Julian L. Rawls, M.D., Norfolk.

LEGISLATION: W. C. Caudill, M.D. (2), Pearisburg, *Chairman;* Dean B. Cole, M.D. (3), Richmond; Frank

A. Farmer, M.D. (2), Roanoke; James R. Gorman, M.D. (2), Lynchburg; Carrington Williams, M.D. (1), Richmond; J. D. Hagood, M.D. (3), Clover; G. C. Tyler, M.D. (1), Newport News; C. C. Smith, M.D. (1), Norfolk; P. W. Boyd, M.D. (3), Winchester.

MEDICAL ECONOMICS: J. T. T. Hundley, M.D. (1), Lynchburg, *Chairman;* James P. Williams, M.D. (3), Richlands; Walter B. Martin, M.D. (1), Norfolk; H. H. McGuire, M.D. (2), Winchester; George S. Hurt, M.D. (2), Roanoke; J. B. McKee, M.D. (3), Winchester.

MEMBERSHIP: B. E. Harrell, M.D. (2), Norfolk, *Chairman;* J. Boling Jones, M.D. (1), Petersburg; A. M. Showalter, M.D. (3), Christiansburg.

ETHICS: J. L. Hamner, M.D. (3), Mannboro, *Chairman;* K. D. Graves, M.D. (2); Roanoke; R. L. Raiford, M.D. (1), Franklin.

JUDICIAL: J. Morrison Hutcheson, M.D. (3), Richmond, *Chairman;* Hugh H. Trout, M.D. (2), Roanoke; P. St. L. Moncure, M.D. (1), Norfolk.

Special Committees

PUBLIC RELATIONS AND MEDICAL SERVICE: J. M. Emmett, M.D., Clifton Forge, *Chairman;* H. B. Mulholland, M.D., Charlottesville; L. J. Roper, M.D., Richmond.

RURAL HEALTH: H. B. Mulholland, M.D., Charlottesville, *Chairman;* E. C. Jamison, M.D., Rocky Mount; W. R. Pretlow, M.D., Warrenton; L. J. Roper, M.D., Richmond.

CHILD WELFARE: Emily Gardner, M.D., Richmond, *Chairman;* J. M. Bishop, M.D., Roanoke; W. T. Graham, M.D., Richmond; R. B. Hightower, M.D., Alexandria; Mary E. Johnston, M.D., Tazewell; F. N. Mullen, M.D., Norfolk; W. W. Waddell, M.D., Charlottesville; J. B. Stone, M.D., Richmond.

MATERNAL HEALTH: C. J. Andrews, M.D., Norfolk, *Chairman;* A. L. Carson, M.D., Richmond; G. N. Carter, M.D., Boydton; A. M. Groseclose, M.D., Roanoke; J. M. Nokes, M.D., Charlottesville; C. A. Nunnally, M.D., Fredericksburg; Waverly R. Payne, M.D., Newport News; Glenn Campbell, M.D., Staunton; M. Pierce Rucker, M.D., Richmond; L. L. Shamburger, M.D., Richmond.

WALTER REED COMMISSON: Clarence Porter Jones, Sr., M.D., Newport News, *Chairman;* J. D. Clements, M.D., Ordinary; James W. Smith, M.D., Hayes Store.

TO CONFER WITH STATE BOARD OF NURSE EXAMINERS: I. A. Bigger, M.D., Richmond, *Chairman;* W. C. Akers, M.D., Stuart; Russell Buxton, M.D., Newport News; J. A. Gooch, M.D., Alexandria; A. P. Jones, M.D., Roanoke; C. Bruce Morton, M.D., Charlottesville; F. B. Teague, M.D., Martinsville; C. R. Titus, M.D., Bedford; S. H. Garst, M.D., Staunton.

VENEREAL DISEASE CONTROL: W. W. S. Butler, M.D., Roanoke, *Chairman;* David S. Garner, M.D., Roanoke; L. J. Roper, M.D., Richmond; Raymond Kimbrough, M.D., Richmond; James W. Love, M.D. Alexandria; D. C. Smith, M.D., Charlottesville; Richard Fowlkes, M.D., Richmond.

TUBERCULOSIS: C. Lydon Harrell, M. D., Norfolk, *Chairman;* Frank B. Stafford, M.D., Charlottesville; J. B. Nicholls, M.D., Catawba Sanatorium; Charles W. Scott, M.D., Burkeville.

MENTAL HYGIENE: Frank H. Redwood, M.D., Norfolk, *Chairman;* J. E. Barrett, M.D., Richmond; R. Finley Gayle, M.D., Richmond; James P. King, M.D., Radford; David C. Wilson, M.D., Charlottesville; J. B. Pettis, M.D., Staunton.

CANCER: George Cooper, Jr., M.D., Charlottesville, *Chairman;* I. A. Bigger, M.D., Richmond; C. W. Eley, M.D., Norfolk; A. B. Gathright, Jr., M.D., Richmond; E. P. Lehman, M.D., Charlottesville; Wm. H. Parker, M.D., Charlottesville; Julian L. Rawls, M.D., Norfolk; Mason Romaine, M.D., Richmond; L. J. Roper, M.D., Richmond; Herbert Wolff, Jr., M.D., Alexandria; George Z. Williams, M.D., Richmond.

INDUSTRIAL HEALTH: H. U. Stephenson, M.D., Richmond, *Chairman;* W. B. Barton, M.D., Stonega; M. W. Healy, M.D., Norfolk; J. V. Jordan, M.D. Covington; Alexander McCausland, M.D., Charlottesville; C. L. Savage, M.D., Waynesboro; T. J. Tudor, M.D., Norton; James Elliott, M.D., Lebanon.

NUTRITION: McLemore Birdsong, M.D., Charlottesville, *Chairman;* George H. Carr, Jr., M.D., Portsmouth; Edwin A. Harper, M.D., Lynchburg; A. B. Hodges, M.D., Norfolk; E. G. Scott, M.D., Lynchburg; C. C. Powel, M.D., Harrisonburg.

ADVISORY TO WOMAN'S AUXILIARY: S. K. Ames, M.D., Cape Charles, *Chairman;* George S. Hurt, M.D., Roanoke; P. W. Miles, M.D., Danville; H. A. Latane, M.D., Alexandria; Reuben Simms, M.D., Richmond.

REHABILITATION: Roy M. Hoover, M.D., Roanoke, *Chairman;* Paul D. Camp, M.D., Richmond; George A. Duncan, M.D., Norfolk; J. R. Blalock, M.D., Marion; N. F. Rodman, M.D., Norfolk; L. J. Roper, M.D., Richmond; G. B. Setzler, M.D., Pennington Gap; Leroy Smith, M.D., Richmond; Frank B. Stafford, M.D., Charlottesville; W. E. Dickerson, M.D., Danville; G. S. Fitz-Hugh, M.D., Charlottesville; F. J. Wright, Jr., M.D., Petersburg.

NATIONAL EMERGENCY MEDICAL SERVICE: John Powell Williams, M.D., Richmond, *Chairman;* Guy Richardson, M.D., Bristol; R. P. Bell, Jr., M.D., Staunton; W. H. Chapman, M.D., Suffolk; Beverley F. Eckles, M.D., Galax; J. M. Hurt, M.D., Blackstone; Frank A. Farmer, M.D., Roanoke.

CONSERVATION OF HEARING: P. N. Pastore, M.D., Richmond, *Chairman;* Fletcher Woodward, M.D., Charlottesville; H. Grant Preston, M.D., Harrisonburg; C. C. Cooley, M.D., Norfolk; Mortimer Williams, M.D., Roanoke; T. M. Winn, M.D., Covington.

BUSINESS SESSIONS

Council

Special Meeting

A special meeting of the Council was held at the Hotel Roanoke on Sunday, October 12th, at 8:30 P.M. Dr. W. L. Powell, President, presided with others in attendance as follows: Dr. Guy Fisher, president-elect; Dr. A. B.

Hodges, vice-president; Drs. R. B. Bowles, C. L. Harrell, Carrington Williams, J. L. Hamner, W. A. Porter, W. R. Whitman, J. E. Knight, and F. H. Smith, councilors; Dr. M. P. Rucker, editor of the MONTHLY; Dr. L. J. Roper, State Health Commissioner; and Dr. W. B. Martin.

The purpose of this meeting was to receive a report of the survey of hospitals and hospital facilities in Virginia as provided by the Hill-Burton Bill. Dr. Roper introduced Mr. A. Gibson Howell, director of the Commission appointed by Governor Tuck to make this survey. He stated that Virginia is naturally divided into six trade areas which will be used as regional centers. These centers are Richmond, Norfolk, Roanoke, Charlottesville, Alexandria and Danville. Their recommendations include plans for hospitals and additions to present hospitals in these centers, these to be lined up with smaller area centers and hospital communities. The intermediate area hospital would be from 150 to 200 beds and the rural hospitals from 50 to 75 beds. It is estimated that 4.6 beds per 1,000 population are needed. There were 6,870 approved beds in Virginia, and an additional 5,875 are needed in general hospitals. There are 3,848 acceptable hospital beds in mental institutions in Virginia, with 5,386 unacceptable beds. It is proposed that there be 8,857 new mental beds and a 400-bed alcoholic hospital. There was also a recommendation of a new hospital for colored tuberculosis patients to be located in Richmond and an increase in the capacity of existing sanatoria. Establishment of two chronic disease hospitals—one in Richmond and one in Charlottesville—is also recommended. Mr. Howell stated that this survey was made only to point out the need for hospital services in Virginia. His report has been approved by the Virginia Hospital Association and the Virginia Graduate Nurses Association and will be presented at a public hearing for approval before being presented the Federal Government. One-third of the funds necessary for this work will be furnished by the Federal Government but the other two-thirds must be made up by the community and state.

After a discussion, Dr. Harrell moved the approval of this plan in principle. Seconded and carried.

The special meeting then adjourned.

Regular Meeting

The regular meeting of the Council was called to order by the President, Dr. Powell, at the Hotel Roanoke, October 13th, at 9:30 A.M. The following were present: Dr. Fisher, president-elect; Dr. Julian L. Rawls, immediate past president; Dr. Hodges, vice-president; Drs. Bowles, Harrell, Williams, Hamner, Porter, Whitman, A. F. Robertson, Knight, and Smith, councilors; Dr. Rucker, editor, and Dr. Roper, State Health Commissioner.

The minutes of the Executive Session of the Council, held on May 24, 1947, were read by the secretary and approved.

The minutes of the January meeting, published in the March issue of the VIRGINIA MEDICAL MONTHLY, were also approved as published.

The budget as prepared by Drs. Williams, Harrell and Whitman, was then presented as follows:

BUDGET—OCTOBER 1, 1947—SEPTEMBER 30, 1948

EXECUTIVE OFFICE	PROPOSED
Salaries	$ 6,400.00
Bonuses	600.00
Office Rent	600.00
Telephone and telegrams	200.00
Stationery and office supplies	175.00
Repairs and replacements	150.00
Postage	300.00
Audit Fee	90.00
Social Security tax	60.00
State Convention expense	700.00
Delegates to A.M.A.	600.00
Councilors and Secretary's expense	100.00
President's expense	100.00
President-Elect's expense	50.00
Special Appropriations	500.00
Miscellaneous	75.00
Virginia Medical Monthly	13,000.00
Walter Reed Commission	75.00
Clinical and Medical Education	1,200.00
Maternal Health	25.00
Cancer Control	175.00
Scientific Exhibits	750.00
President's Contingent Fund	500.00
Va. Council on Health and Medical Care	500.00
New Filing System	350.00
	27,275.00
PUBLIC RELATIONS DEPARTMENT	
Salary—Director	7,000.00
Salaries—Personnel	3,000.00
Traveling expense	2,000.00
Conferences	1,000.00
Radio programs	3,500.00
Press—Materials	4,000.00
Printing, literature and bulletins	3,000.00
Telephone and telegrams	1,000.00
Office Rent	600.00
Stationery and office supplies	500.00
Postage	1,000.00
Office equipment	500.00
Miscellaneous	1,000.00
	28,100.00
TOTAL	$55,375.00

Dr. Rawls asked if the Council had ever considered a retirement fund for employees of the executive office, and moved that the budget committee look into the feasibility of establishing such a fund. Seconded and carried.

Dr. Harrell moved that the Public Relations Committee be permitted to change the appropriations of that department from one feature of their work to another when found necessary. Seconded. Dr. Williams moved that items be shifted at the discretion of the budget committee. Seconded and carried.

Dr. Porter moved that the budget committee be requested to report to the Council at its next meeting with regard to the retirement fund. Carried.

The budget was approved as presented.

Dr. Knight presented the following resolution:

WHEREAS a major part of the military medical work during time of war is of a necessity done by civilian doctors in uniform, the Medical Society of Virginia does not consider it remiss that it interest itself in medical problems and policies concerning the Armed Forces, and

WHEREAS the incorporation of women in the Armed Forces, in functions other than the Nurses Corps, presents a new military medical problem, and

WHEREAS when a woman enters the military organization she surrenders her right to choose her own doctors.

THEREFORE, BE IT RESOLVED that we, the Medical Society of Virginia, go on record as approving the efforts made by Senator Harry F. Byrd during the last session of Congress to secure specialist medical care for military women in problems peculiar to the female, and further that we request Senator A. Willis Robertson, and all the members of Congress from Virginia to assist in this effort and, if such effort be impossible of accomplishment in its present form, that the above named Senators and Congressmen from Virginia be urged to work towards the accomplishment of this goal (the proper medical care of military women in problems peculiar to the female) by some other legislative means, such as the appointment of a consultant of high rank to the Surgeon General's office and in the corresponding medical services of the Navy and Air Corps, who shall be a doctor of prominence in the field of medical problems peculiar to the female, and the duty of each such officer shall be to advise with the head of his respective medical service (Army, Navy, or Air Corps) on the formulation of regulations, procedures, and practices affecting medical problems peculiar to women, and that a copy of this resolution be forwarded to the above named Senators and Congressmen.

Drs. Williams and Rawls said the Army and the Navy both have obstetricians and gynecologists in their service and Dr. Hodges felt they had as many as they needed. Dr. Knight moved the adoption of this resolution and it was seconded by Dr. Smith. Dr. Williams did not think the Society should take any action about the distribution of specialists in the army and navy and certainly not in isolated instances. The motion was lost.

The Cancer Committee had asked Dr. Powell if the Society would pay the expenses of Dr. Charles F. Branch inspector of cancer clinics in the United States for the American College of Surgeons, incident to attending their meeting to make a report which they had requested. Dr. Rawls moved that his expenses be paid. Seconded and carried.

It was stated that the Committee on Legislation had prepared a very complete pamphlet on chiropractors and naturopaths and wished instructions as to how this should be distributed. It was felt that the individual doctor should call this to the attention of the legislator and it should be sent the latter so he would have sufficient time to study it. Dr. Harrell moved that the pamphlets be distributed to the councilors and they in turn see that the family physician take it to the legislator. Seconded and carried.

Dr. Hamner presented the following resolution:

From reports of the press it is evident that there are certain factions in our government that are using the veterans of this war as political footballs and in so doing are placing a deep wedge for state medicine. The war has now been over for about two years. The government has recently turned over to the state the Woodrow Wilson Hospital and has closed one of the hospitals in the Newport News area. The Woodrow Wilson Hospital cost several million dollars to build. Recently from newspaper reports they purchased some ground in the Alexandria area for approximately $100,000 with the idea of constructing there a veterans hospital. If there is need for another veterans hospital in this area it seems rather poor business to give away one hospital and in approximately the same year make plans to build another hospital less than a hundred miles from the one that was given away.

We all agree that veterans that were wounded or became sick as a result of the war should receive the best attention possible, and there is no limit as to what should be done for them.

The question is why should the government now be planning to build many new veterans hospitals. There were more than ten million veterans in World War II. Take these veterans and the veterans of previous wars and you are taking from the practitioner (private) a large part of his income. The government is not giving to the veteran free coal, free housing and free clothing and it seems as if these are just as essential to the good living of the veteran as free medical care. As a matter of fact if all the plans now in contemplation go through it will make already scarce building materials much more difficult to procure with the result that those without homes will be much longer without them. It is also very probable that if the present plans go through that the veterans families will be next in line for free medical care. If 13,000,000 families are getting free medical care then you have state medicine.

The cost of building and equipment per hospital bed in a veterans hospital is approximately $20,000. The cost per day for a veteran in a veterans hospital is $18.00, whereas the cost for building and equipment in a civilian hospital is $10,000 and the per diem cost per patient in a civilian hospital the country over is from $10.00 to $12.00. Be It Resolved that this information be passed on to veterans organizations and that the American Medical Association be asked to oppose the construction of said veterans hospitals except as actually needed for the care of war wounded and sickness contracted as a direct result of the war.

The above has been presented and approved by the Prince Edward County Medical Society and the fourth District Medical Society.

Drs. Rawls, Robertson and Fisher did not feel the Council could do anything about this and they did not think it advisable to bring it to the House of Delegates.

The secretary was instructed to send a telegram to Dr. P. St. L. Moncure, one of the past presidents and a most active member, expressing the regret of the Council at his illness and hope for a speedy recovery.

There being no further business, the Council adjourned.

House of Delegates

The House of Delegates was called to order by the President at 11:00 A.M., October 13th at the Hotel Roanoke. Roll call showed a quorum present.

The minutes of the last meeting as published in the December 1946 issue of the MONTHLY were approved.

The budget, as approved by the Council, was then presented by Dr. Williams, chairman of the budget committee. It was moved and carried that this be accepted.

Committee reports as published in the October issue of the MONTHLY (pages 464-479) were considered as follows:

Executive Secretary-Treasurer (page 464)—accepted.

Director of Public Relations (pages 464-7)—accepted.

Delegates to the American Medical Association (page 467)—accepted.

Publication and Program (page 468)—accepted.

Clinical and Medical Education (pages 468-9)—accepted.

Scientific Exhibits and Clinics (page 469)—accepted.

Legislation (pages 469-70). Dr. Caudill, chairman, told of the pamphlet which had been prepared and published with regard to naturopaths and chiropractors. They will be distributed to the councilors and they in turn will see that the members get them. The individual member is to contact the representatives in the General Assembly. Dr. Hiden called attention to the article in *Hygeia* "Can Chiropractic Cure" and felt these could well be distributed to the county societies. The report was accepted.

Medical Economics (page 470)—accepted. Dr. Hundley, chairman, felt the committee had worked out of work because the legislation and public relations committees had taken over. He thought the question of continuing this committee should be discussed at the next meeting of the Council.

Ethics (page 470)—accepted.

Membership (pages 470-1). Dr. Harrell, chairman, read the recommendation with regard to the retiring president, Dr. Powell, being made an honorary member. Report accepted.

Judicial (page 471). Dr. Hutcheson, chairman, presented the following supplemental report:

Add to new Section 6 of Article VI: No Councilor who has served four (4) successive terms shall be eligible to succeed himself.

Article VIII, Section 1, add the following paragraph at end of section:

An executive committee of the Council composed of three members shall be appointed annually by the President. This committee shall act in an advisory capacity to the President in those matters in which the advice of the Council is desired, but which are not of sufficient importance to warrant calling a meeting of the full Council.

These, with the published report, were laid on the table for final action the next day.

Public Relations (pages 471-3)—accepted.

Rural Medical Service (pages 473-4). Dr. Mulholland, chairman, re-emphasized the importance of having these meetings with farmers and doctors and urged the members to attend and take part in the discussions. Report accepted.

Child Welfare (page 474). Dr. Gardner, chairman, stated that she hoped by next year to have some of these statistics published in the journal. Report accepted.

Maternal Health (pages 474-5)—accepted.

Walter Reed (page 475)—accepted.

To Confer with State Board of Nurse Examiners (page 475)—accepted.

Venereal Disease Control (pages 475-6). Dr. Butler, chairman, presented the following supplementary report:

1. To supplement the publicized report of the committee on therapy, it should be emphasized that the use of penicillin is still in the experimental stage, as far as the time and dosage factor is concerned.
2. To promote an educational program to the medical profession on the subject of the interpretation of serological results. Upon request the Venereal Disease Committee will supply competent speakers to appear before local medical societies.

The report and supplement were accepted.

Tuberculosis (pages 476-7). Dr. Harrell, chairman, moved that this be accepted and a copy sent to the Governor. In discussing this report, Dr. Roper stated that the Health Department, in a report to the Governor, had requested funds for a new 300-bed negro sanatorium in addition to 51 additional beds at Piedmont Sanatorium, for a new 100-bed infirmary at Catawba Sanatorium, and for 100 new beds at Blue Ridge Sanatorium—a total of 551 additional tuberculosis beds—and asked the support of the medical profession in this request. Report accepted.

Mental Hygiene (pages 477-8). Dr. Barrett said that any program of prevention in the field of mental health must be predicated on a program of sound physical health. He advocated a much more active treatment program at the hospital level and the development of an active program of out-patient mental hygiene clinics throughout the State, as this will cut down on the growing demand of hospital patients. The report was accepted.

Industrial Health (page 478). Dr. Stephenson, chairman, stated that he had learned the two medical schools are already having these courses on industrial health. Report accepted.

Cancer (page 478). Dr. Cooper, chairman, presented the following supplementary report:

Since the 1946 meeting of the Cancer Committee, Dr. Charles F. Branch, assistant director of the American College of Surgeons, has surveyed the tumor clinics and detection centers in Virginia. Dr. Branch attended the Cancer Committee's meeting last night and expressed full approval of the cancer program in this state.

Following his report, the Cancer Committee voted to approve the following clinics for the coming year:

The Elizabeth Buxton Tumor Clinic at Newport News
The Chesapeake and Ohio Tumor Clinic at Clifton Forge
The Dixie Hospital Tumor Clinic at Hampton
The Jefferson Hospital Tumor Clinic at Roanoke
The Lynchburg Tumor Clinic
The McIntire Tumor Clinic at the University of Virginia
The Medical College of Virginia Tumor Clinic at Richmond
The McCluer Diagnostic Tumor Clinic at Alexandria, and
The Diagnostic Tumor Clinic at Norfolk.

The Danville Tumor Clinic was given provisional approval subject to confirmation by the American College of Surgeons.

The Cancer Committee voted to recommend to the

Board of Trustees of the Virginia Division of the American Cancer Society that the Virginia Division reimburse the localities half of the money used by them for hospitalization of medically indigent cancer patients at the approved tumor clinic hospitals, provided the localities' funds are matched from the state hospitalization fund. The Cancer Committee also recommended that the Virginia Division pay x-ray therapy costs at the rate of $3.00 per treatment up to $25.00 for a course of treatments.

The Cancer Committee discussed the need for an organized speakers' bureau to supply speakers when requested for the component societies' programs and for post-graduate educational programs. It referred this question to the Committee on Post-graduate Medical Education, and will organize a speakers' bureau for cancer only if the Committee on Postgraduate Medical Education decides not to organize a bureau covering all fields of medical practice.

Dr. Mason Romaine, Director of the Bureau of Cancer Control of the State Health Department, presented his program for discussion. His initial projects are a central tumor registry, a program for professional and lay education, and a tumor tissue diagnostic service. His program was endorsed by the Cancer Committee.

Accepted.

Advisory to Woman's Auxiliary (page 478)—accepted. The following report was received from the Auxiliary:

TO THE HOUSE OF DELEGATES OF THE
MEDICAL SOCIETY OF VIRGINIA:

As president of the Woman's Auxiliary to the Medical Society of Virginia, I wish to submit the following report:

This year will complete our twenty-fifth year of service to the Medical Society of Virginia. Twenty-five years ago the Auxiliary was organized in Norfolk, and twenty-four years ago, the first annual meeting was held in Roanoke.

There are now 10 component auxiliaries with a paid-up membership as of October 1, 1947, of 409, showing an increase of 12 members for the year. There are 11 members-at-large and 2 honorary members. I regret to report a request of withdrawal received from the Auxiliary to the Loudoun-Fauquier Medical Society, which was granted.

Conditions made it impossible for me to accept invitations to visit the Auxiliaries and I could not attend the American Medical Association Auxiliary meeting in Atlantic City. However, I have enjoyed the personal contacts which have been gained through correspondence. Many letters have been received and I have written over five hundred during the year.

The Annual Conference for State Presidents and Presidents-elect held in Chicago in December was attended by the President and President-elect. The exchange of ideas at that conference was most beneficial, and I hope the conference will be continued.

The Virginia Auxiliary was ably represented at the Annual Meeting of the Auxiliary to the American Medical Association in Atlantic City last June and the reports of that meeting, by the delegates, encouraged and inspired us.

It was our pleasure to have as our guests at the Annual State Meeting at Virginia Beach, Mrs. Jesse D. Hamer, then President of the Woman's Auxiliary to the American Medical Association and Mrs. W. W. Potter, then President of the Auxiliary to the Southern Medical Association. Their messages were a challenge to greater endeavor and accomplishment.

One of the highlights of our year was the attendance of representatives of the Woman's Auxiliary, by special invitation from the Medical Society of Virginia, at the Five Point Public Relations Conference held at the John Marshall Hotel, Richmond on December 19, 1946. The discussions were informative, and very helpful to our Public Relations Chairman and our Program Chairman, both of whom were in attendance.

Our program for the year was planned to coordinate the objectives of the Auxiliary with those of the communities through more effective Public Relations. To the Public Relations meetings were invited representatives from all the women's civic organizations. Information was given on health education, legislation and the constructive medical service plans offered by the members of the medical profession, as an alternate to "Federalized Medicine".

The importance of the *Bulletin* has been stressed and we are glad to report an increase in the number of subscriptions, the total for the year being 85.

Hygeia is widely read and I feel that our subscription figure of 82 does not in any way reflect the extent to which this authentic health magazine is used.

Greater interest and activity have been shown in Cancer Control. Auxiliary members have served on the Board of the Virginia Cancer Foundation and done volunteer work in the Cancer Prevention Clinic and for Cancer Bandage Workrooms.

Virginia has participated in the three projects sponsored by the Woman's Auxiliary to the Southern Medical Association. More liberal contributions have been made to the Jane Todd Crawford Memorial Fund. Doctor's Day was observed in various ways with programs suited to the communities. There will be filed in the Southern Medical Lending Library an article written by one of our members on "The History and Romance of Medicine".

A particular project of the Virginia Auxiliary is the memorial fund established in memory of the Doctors Leigh, Hodges and Wright, to be used for a physician, or a physician's dependent, in a State Tuberculosis Sanatorium. This year the fund was used by a young physician. It is the hope that some day we will be able to accumulate a fund sufficient for the establishment of an endowment for a bed in one of our sanatoriums.

Through the courtesy of the Medical Society of Virginia, articles of interest and activities of the County Auxiliaries have been printed on the Auxiliary page of the MONTHLY.

The constitution, submitted by the Committee on Revisions of the Auxiliary to the American Medical Association, was accepted and our by-laws were revised to be consistent with those of the National Auxiliary and both were unanimously adopted at the Annual Meeting at Virginia Beach in 1946.

Our historian has carefully preserved all data received, but urges each County President to cooperate in assembling more information.

The Treasurer and Chairman of Finance have kept our finances in excellent condition.

Every member of the Auxiliary has been actively engaged in one or more phases of post-war work. The philanthropic work ranged from the donation of large sums to hospitals, a linen shower for a hospital, a scholarship for a nurse, library funds, Christmas parties and Christmas boxes for soldiers and crippled children, chaperoning U.S.O. parties, helping with Infantile Paralysis Drive, the establishment of a building fund to secure a home for the County Medical Society, the establishment of memorial funds for local hospitals to volunteer service in hospitals and clinics.

The social aspect of the Auxiliary has been more widely stressed this year. One Auxiliary gave an informal reception and a buffet supper for the doctors who were members of the County Medical Society and had as special guests the doctors and their wives who came to the County during the year. Another Auxiliary had a social affair and luncheon for the doctors in July at the beach. A dinner-dance was given by another to commemorate Doctor's Day.

To my official family, I wish to express my thanks for their unfailing kindness to me, for their loyalty, cooperation and able assistance on all occasions. Our associations

have been most pleasant. To the Advisory Council I express appreciation for their advice and encouragement. Thanks and appreciation are expressed to Miss Agnes V. Edwards, Executive Secretary of the Medical Society of Virginia, for her assistance. Gratefulness is extended for the generous assistance and interest which has been forthcoming at all times from Dr. W. L. Powell, President, and the other officials of the Medical Society. I bespeak for Mrs. McCormis the same consideration you have shown me.

In closing this report, I desire to express my gratitude to all members of this wonderful organization for the great privilege of serving as State President.

The Woman's Auxiliary may be very proud of the progress it has made in the first twenty-five years of organization. If the same degree of enthusiasm and sincere interest continues in the future, great hopes may be held for its development and its accomplishments, thus maintaining its high ideals of service.

Respectfully submitted

LOUISE J. HAMNER (Mrs. John Edward),
President, Woman's Auxiliary to the Medical Society of Virginia.

Rehabilitation (pages 478-9)—accepted.

Nutrition (page 479)—accepted.

National Emergency Medical Service (page 479)—accepted.

A recess was given for the appointment of a nominating committee, which resulted as follows:

1st District—Dr. E. B. Mewborne
2nd District—Dr. M. S. Fitchett
3rd District—Dr. Douglas Chapman
4th District—Dr J. L. Hamner
5th District—Dr. W. A. Porter
6th District—Dr. John Hundley
7th District—Dr. Alex Robertson
8th District—Dr. H. B. Mulholland
9th District—Dr. Frank Smith

A group life insurance plan had been offered members of the Society by the Connecticut General Life Insurance Company, and this was explained by Mr. G. H. Winfrey. The plan is voluntary but at least 75 per cent of the members and their employees must participate. The semi-annual rate for $1,000 will be approximately $9.00 and the amount a member may take varies with his age—less than 66 years of age, $7,500; 66 but less than 76 years of age, $5,000; and 76 years of age and over, $1,000. A general discussion brought out the following facts: this insurance may be paid to a beneficiary over a period of time or in a lump sum whichever is preferred; there is no cash value to the policy; if the plan goes through the detail work will have to be handled by the Society in the future; at least 75 per cent of employees of members must take the insurance. Dr. M. B. Hiden moved that the plan be accepted. This was seconded and carried.

Dr. Powell then announced that the House would have the privilege of hearing two speakers—one for the Association of American Physicians and Surgeons and the other for the National Physicians Committee. Dr. James King introduced Marjorie Shearon, Ph.D., Legislative Consultant of Washington, D. C., who spoke on Federal Propaganda for the Welfare States. Mr. M. H. Petersen, Chicago, then spoke on the National Physicians Committee.

Dr. W. B. Martin stated that he realized these talks would bring forth much discussion and resolutions and, due to the lateness of the hour, moved that resolutions be introduced at this time and action be deferred on them until the next meeting. Seconded and carried.

Dr. Ben Rawles, Jr., then read the following resolution:

WHEREAS, the Association of American Physicians and Surgeons has as one of its principal objects the maintenance of medicine as a free enterprise in the United States; and,

WHEREAS, the Association proposes to organize physicians to agree to participate only in such methods of rendering medical service which are in the public interest; and,

WHEREAS, the Association proposes to accomplish universal application of the insurance principle to the costs of medical care under proper voluntary plans; and,

WHEREAS, the Association proposes to educate the people to the use and benefits of voluntary plans of prepayment sickness insurance; and,

WHEREAS, the Association proposes to operate an endless public relations program which, first, will correct any errors within the profession, and then, use every available publicity channel to tell the public what has been accomplished in its interest; and,

WHEREAS, the Association proposes to conduct a continuing publicity campaign to inform all levels of the public of the value of the private practice of medicine and the evils of compulsory health insurance and state or socialized medicine; and,

WHEREAS, the Association proposes to earn again the respect for and understanding of the medical profession by the nation's lawmakers through proper, effective representation in Washington; and,

WHEREAS, the Association proposes to effect increasing support of the American Medical Association so that this scientific body may continue to improve upon its contributions to public health and the science of medicine;

NOW, THEREFORE, BE IT RESOLVED: That the House of Delegates of the Medical Society of Virginia does hereby approve the objectives of the Association of American Physicians and Surgeons.

Dr. Martin presented three resolutions as follows:

WHEREAS, competent nursing is an integral part of medical practice, and a proper concern of physicians and medical organizations; and

WHEREAS, the increasing shortage of nurses during recent years has now reached alarming proportions and seriously handicaps medical care; and

WHEREAS, at several sessions of the House of Delegates of the American Medical Association committees have been appointed to look into the matter, and at the last meeting in June, 1947, a committee of five (5) to be appointed by the president was authorized to study all aspects of the question; and

WHEREAS, the current system of training nurses is a principal cause of this shortage, and no relief may be expected until it is revised; and

WHEREAS, the curriculum which has been evolved during the past few decades and which is in operation at present has failed to produce better nurses. More and more time has been devoted to the study of supposedly ancillary subjects with the consequent neglect of training in the practical art of caring for the sick, with the result that the present-day graduate is not so well prepared to meet the patient's needs as were her sisters of a generation ago; and

WHEREAS, the present trend toward the formation of a new group of practical nurses is a significant develop-

ment illustrating the need and demand for more effective nursing service.

THEREFORE, BE IT RESOLVED by the House of Delegates of the Medical Society of Virginia in session on October 14, 1947, at Roanoke, Virginia, that:

A proper integration of the training of the two groups of nurses should be effected in such a way as to best serve the purpose of good medicine, the welfare of the patient, the continued development of the nursing profession, and provide an adequate number of nurses trained in the art and practice of bedside nursing; and

BE IT FURTHER RESOLVED that this resolution be presented to the House of Delegates of the American Medical Association, and the copies be sent to the Special Committee on Nursing of the American Medical Association, the Nurses Association of Virginia, and the National Nurses Association.

WHEREAS: The business of this Society has become increasingly important and complexed;

WHEREAS: In the time available for full meetings of the House of Delegates it is impossible to give adequate consideration to important reports and resolutions;

THEREFORE, BE IT RESOLVED that the council be directed to consider the advisability of revising the procedure of the House of Delegates, and that they carry on the study either through their own body, or by a special committee appointed by the council.

BE IT FURTHER RESOLVED: That the council be empowered to set-up an improved procedure for the next meeting of the House of Delegates.

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1. WHEREAS, the most important problem before the medical profession today is, a better distribution of good medical care; and

2. WHEREAS, if the trend toward Federal Control of Medicine is to be permanently ended it must be done by an informed and aroused public; and

3. WHEREAS, an intelligent understanding of the problem of medical care by lay group would aid materially in accomplishing this purpose; and

4. WHEREAS, the spread of sound medical opinion as to the proper solution of the problem of medical care can be most effectively accomplished on the local level.

THEREFORE, BE IT RESOLVED, that the House of Delegates of this Society urge each county and component society to organize councils or committees on medical service made up of informed members of the profession, and representatives from important lay groups, and that these councils undertake the study of the medical problems in each community.

The House then adjourned to meet again the next afternoon at 4:30 P.M.

Second Meeting

The second meeting of the House of Delegates was held on October 14th at 4:30 P.M., with Dr. Powell presiding.

The first order of business was the report of the Nominating Committee, which was as follows:

President-elect—Dr. M. P. Rucker, Richmond

Vice-Presidents—Dr. Frank Farmer, Roanoke
Dr. W. D. Kendig, Kenbridge
Dr. P. W. Boyd, Winchester

Executive Secretary-Treasurer—Miss Agnes V. Edwards, Richmond

It was moved and carried that this be accepted.

Councilors from the odd numbered districts were named at this time:

1st— Dr. R. B. Bowles, Mathews

3rd—Dr. Guy W. Horsley, Richmond

5th—Dr. W. A. Porter, Hillsville

7th—Dr. R. P. Bell, Jr., Staunton

9th—Dr. James P. King, Radford

Dr. H. B. Mulholland, Charlottesville, and Dr. Walter B. Martin, Norfolk, were re-elected as delegate and alternate, respectively, to the American Medical Association for a term of two years.

An invitation was extended from the Richmond Academy of Medicine, the Richmond Chamber of Commerce, and Mayor Edwards of Richmond, to hold the 1948 meeting of the Society in that city. This was unanimously accepted.

The amendments to the By-Laws as presented at the first meeting of the House were next considered. It was moved and carried that these be accepted.

Dr. Hiden then offered a vote of thanks to the Roanoke Academy of Medicine and the Hotel Roanoke for their wonderful hospitality and the marvelous service they have rendered at this meeting. Carried.

Dr. K. D. Graves, secretary of the State Board of Medical Examiners, stated that the Board knows how many doctors have been licensed since 1885, but they have no way of knowing how many are in practice in Virginia at the present time. The Board felt there should be an annual registration of doctors in the State and he moved that the House go on record as approving this. Dr. W. B. Martin offered an amendment that the fee charged for this registration be only enough to defray the actual cost of operations. The motion was carried.

Dr. Martin's motions which were presented at the end of the first meeting were then considered. The first one, with regard to the education of nurses, was adopted, as was also the one with regard to the revision of the procedure of the House of Delegates. He moved the adoption of the resolution with regard to medical service and this was seconded. Dr. W. O. Bailey wanted to know how the doctors are going to get this information to give the public. Dr. Martin stated that the American Medical Association through its Councils on Medical Service and Rural Health has accumulated a lot of information. Mr. Johnson, Director of Public Relations of the State Society, should have this material available and should have it in the library of each hospital. The doctor can get the information but he must make it work because it is up to the individual doctor to arouse the public with regard to federalized medicine. Dr. H. B. Mulholland stated the Public Relations office had an exhibit at this meeting and they have a number of pamphlets on display which are available to doctors. The resolution was then adopted.

Dr. Kinloch Nelson asked if anyone knew whom to see about having the nursing education changed. Dr. Julian Rawls said that if a nurse graduated in less than three years she cannot get reciprocity in any of the northern states. Dr. Carrington Williams said he and Dr. Harry Warthen had looked up the law with regard to the nursing education and it states they should have two years of training. If a nurse is graduated in two years she will be a good clinical bedside nurse. If she wants to

be a specialist or have additional training, the hospital should provide post-graduate courses. Dr. J. M. Hutcheson said the object of this resolution was to record if possible the opinion of the medical profession with regard to the nursing situation. Such a record would be of service to the delegates in the House of Delegates of the American Medical Association. It was felt that as long as nursing is so closely allied to medicine, the doctor should have something to say about the necessary training.

Dr. B. F. Eckles, president of the State Board of Medical Examiners, stated that as long as Dr. Graves was not a delegate, he would like to offer the resolution with regard to registration of doctors, as presented by Dr. Graves, so as to legalize this. This was accepted.

Dr. Ben Rawles then presented his resolution, previously read at the first meeting, with regard to the American Association of Physicians and Surgeons. This was seconded. Dr. Martin thought this an extremely vital question that should be considered very carefully, as the medical profession is not in any too good grace now. Whenever a national organization goes before Congress they are assailed by the opponents as being opposed to any change favorable to the public. Another organization of doctors is not going to win the fight—it must be done on the local level. No organization of doctors is powerful enough to influence congressmen or legislators. The individual is the one who is going to inform them and having other people speak for them is a bad idea. Dr. M. B. Hiden stated this resolution asked for the endorsement of a group of principles all of which seem to be very good. Man's own conscience guides him as to whether certain practices are good or bad for the public. It is only stated that if the government puts out a program which is detrimental to the people, the members will not cooperate with it. It is not drawing the doctor into something that he cannot get out of. Dr. Martin stated that one of the principles of the AAPS is that the medical profession will withhold medical care under certain conditions. Dr. J. P. King stated that it was never their intention to strike against the American public but a desperate battle is being fought to preserve what the doctor now has. Dr. A. M. Showalter said that his society the Southwestern Virginia, had endorsed the AAPS and the delegates had been instructed to vote for this resolution. He felt the doctors had objected to a good many things in the past—public relations, the NPC, etc.—but in the long end they had gotten much out of them. Dr. Hiden stated that Dr. Martin objected to the statement that doctors will not cooperate with a system which they think detrimental to their patients and asked if *he* expected to cooperate with a system which he thought detrimental to his patients. Dr. H. H. Hurt said that of course doctors are not going to do anything harmful to their patients but they certainly did not want to do anything detrimental to the practice of medicine. He felt if this resolution were passed, organized labor would turn against the medical profession. Dr. J. W. Love stated that his organization did not instruct their delegates how to vote but expected them to vote for themselves and he was not in favor of endorsing this resolution. Dr. Mulholland said that everything in this resolution was in the platform of the American Medical Association except for the non-participation clause. One of the greatest criticisms the medical profession has gotten is that they do everything in a negative way and this is surely negative action. Dr. J. L. Rawls did not feel anything could be gained except direct antagonism.

A vote being taken the motion was lost.

Dr. Ben Rawles stated he felt Dr. Martin's resolution with regard to medical service called for renewed activities and it is up to the doctor to go back home and do something about it and not just sit down and do nothing. The doctors should do everything possible to help carry out the program of the American Medical Association.

Dr. N. F. Rodman moved that the Society appoint a committee of at least one man from each congressional district to cooperate with the National Physicians Committee. He felt the man of the street, the laborer, and the man of the union should be told what they will get with socialized medicine. He did not think most of them realized they would have to pay for it. The motion was seconded. Dr. Julian Rawls explained some of the workings of the NPC. Dr. W. R. Pretlow thought the only solution to the problem was for the doctors to offer a good substitute for state medicine—give the people something in place of what you are opposing. The motion, being put to vote, was lost.

Dr. Joseph S. Lawrence, Washington representative of the Council on Medical Service of the American Medical Association, was present and was extended the privilege of the floor. He stated that the medical profession is still in a position where it should be exerting itself in familiarizing local representatives with their attitude on socialized medicine. This can be constructive and does not have to be destructive. He did not think the Wagner-Murray-Dingell Bill would get before the House now but something else will come up in its place. The public had been led to believe that medical science has developed far beyond its application to the individual. A few years ago a person did not call the doctor unless he had an emergency but today the people want to take advantage of medical care. They feel they will have medical care if they subscribe to this medical bill. It is up to the doctors to educate them.

There being no further business, the House adjourned.

AGNES V. EDWARDS,
Secretary.

Approved:
W. L. POWELL, *President.*

Auditor's Report

October 1, 1946—September 30, 1947

THE OFFICERS AND COUNCILORS,
MEDICAL SOCIETY OF VIRGINIA,
RICHMOND, VIRGINIA.

GENTLEMEN:

We have made an examination of the books of the Medical Society of Virginia for the fiscal year ended

September 30, 1947, and have prepared the two accompanying statements. The scope of our examination is explained in the following comments.

The assets and liabilities of the Society at September 30, 1947, are stated in the Balance Sheet, Exhibit "A", the Income and Expenses for the fiscal year ended at that date, on the cash receipts and disbursements basis, are shown in Exhibit "B", and receipts and disbursements of the Legislative Committee Special Fund as Exhibit "C".

Yours very truly,
MITCHELL, WIGGINS & SMITH,
By R. E. WIGGINS,
Certified Public Accountant.

Financial Condition

The financial condition of the Society at September 30, 1947, is given in the Balance Sheet, Exhibit "A", a summary of which is supplied below in comparison with that at September 30, 1946:

ASSETS	9-30-47	9-30-46
Cash	$36,756.49	$21,403.44
Accounts Receivable	1,994.88	1,365.86
Investments—U. S. Bonds	31,649.50	31,211.50
TOTAL	$70,400.87	$53,980.80
LIABILITIES AND SURPLUS		
Liabilities:		
Accounts payable	$ 857.00	$ 1,063.16
Surplus:		
General Fund	55,074.31	38,329.26
Special Legislative Fund	14,469.56	14,588.38
TOTAL	$70,400.87	$53,980.80

Operations

The income and expenses of the General Fund for the fiscal year ended September 30, 1947, are shown in Exhibit "B", prepared on the cash receipts and disbursements basis. A condensed statement of these, in comparison with the results for the preceding year, shows:

INCOME	9-30-47	9-30-46
Membership Dues	$36,327.35	$ 8,789.83
Medical Monthly Publication	17,656.25	15,870.31
Miscellaneous	637.34	2,206.70
TOTAL	$54,620.94	$26,866.84
EXPENSES		
Executive Office	$21,673.77	$19,796.30
Public Relations Department	17,407.80	5,633.50
TOTAL	$39,081.57	$25,429.80
SURPLUS INCOME FOR THE YEAR	$15,539.37	$ 1,437.04

The receipts and disbursements of the Legislative Committee Special Fund are stated in Exhibit "C".

Scope of Examination

All recorded receipts were accounted for by bank deposits, and disbursements were supported by properly signed and endorsed paid checks. Balances on deposit at September 30, 1947, were confirmed by statements on file from depositories as follows:

GENERAL FUND	
First and Merchants National Bank—Checking Account	$19,303.55
First and Merchants National Bank—Savings Account	5,393.90
The Bank of Virginia—Savings Account	6,705.09
Southern Bank and Trust Company—Savings Account	941.89
TOTAL	$32,344.43
LEGISLATIVE COMMITTEE—SPECIAL FUND	
First and Merchants National Bank—Savings Account	$ 4,412.06

Investments, consisting of United States Savings Bonds, were verified by inspection of the bonds on hand. These are shown at their current redemption value on the balance sheet.

Insurance in force, determined from policies on file, was as listed below:

Office Furniture and Fixtures	$1,000.00
Walter Reed House, Belroi, Virginia	1,000.00
Fidelity Bond, Secretary-Treasurer	2,500.00

Balance Sheet—September 30, 1947
Exhibit "A"

ASSETS

CASH		
General Fund	$32,344.43	
Special Fund — Legislative Committee	4,412.06	$36,756.49
DUE FROM MEMBERS (Estimated Collectible Value):		
1947 Dues—30 @ $25.00		750.00
ACCOUNTS RECEIVABLE		
Virginia Medical Monthly for Advertising		1,244.88
INVESTMENTS		
United States Savings Bonds:		
General Fund	$21,592.00	
Special Fund—Legislative Committee	10,057.50	31,649.50
		$70,400.87

LIABILITIES AND SURPLUS

LIABILITIES		
Accounts Payable:		
Preparation of Medical Journal—September, 1947, Issue	$ 802.00	
Social Security Tax	55.00	$ 857.00
SURPLUS		
General Fund	$55,074.31	
Special Fund—Legislative Committee	14,469.56	69,543.87
		$70,400.87

Statement of Income and Expense

For Fiscal Year Ended September 30, 1947

Exhibit "B"

GROSS INCOME	ACTUAL	BUDGET
Membership Dues	$36,327.35	
Commercial Exhibits — Net Receipts	497.19	
Royalties on History of Medicine	62.20	
Interest on Savings Accounts	77.95	
Virginia Medical Monthly:		
Advertising	17,257.15	
Subscriptions from Non-Members	399.10	
TOTAL GROSS INCOME	$54,620.94	
EXPENSES		
Executive Office:		
Salaries	$ 6,400.00	$ 6,400.00
Bonuses for Year Ended September 30, 1946	600.00	600.00
Office Rent	600.00	600.00
Telephone and Telegrams	175.53	150.00
Stationery and Office Supplies	156.54	110.00
Repairs and Replacements	121.76	150.00
Postage	288.82	275.00
Audit Fee	85.00	90.00
Social Security Tax	49.49	60.00
State Convention Expense—1946	1,038.22	700.00
Delegates to A. M. A. Convention	309.24	309.24
Councilor's and Secretary's Expense	74.70	100.00
President's Expense	100.00	100.00
President-Elect's Expense		50.00
Walter Reed Commission Expense	66.00	125.00
Special Appropriations by Council and President	337.39	337.39
Preparation and Distribution of Medical Journal	10,321.84	10,000.00
Miscellaneous Expense	41.80	75.00
Committee Expenses:		
Clinical and Medical Education	316.24	1,200.00
Maternal Health	13.50	20.00
Cancer Control	121.57	145.00
Scientific Exhibits	456.13	456.13
Public Relations and Medical Service		300.00
Child Welfare		10.00
Industrial Health		20.00
TOTAL—EXECUTIVE OFFICE	$21,673.77	$22,382.76
Public Relations Department:		
Salary—Director	$ 7,000.00	$ 7,000.00
Salaries—Secretarial	1,762.55	2,000.00
Traveling Expense	1,171.97	2,000.00
Conferences	266.50	1,000.00
Radio Programs	2,739.82	3,500.00
Press—Advice, Space, Etc.	1,333.08	6,000.00
Printing, Literature, and Bulletins	119.14	3,000.00
Telephone and Telegrams	569.85	1,000.00
Office Rent	565.00	600.00
Stationery and Office Supplies	391.43	500.00
Postage	360.06	700.00
Office Equipment	1,072.01	1,000.00
Miscellaneous	56.39	1,300.00
TOTAL—PUBLIC RELATIONS DEPARTMENT	$17,407.80	$29,600.00
TOTAL EXPENSES	$39,081.57	$51,982.76
SURPLUS INCOME FOR THE YEAR	$15,539.37	

Legislative Committee Special Fund Receipts and Disbursements

For Fiscal Year Ended September 30, 1947

Exhibit "C"

BALANCE—October 1, 1946		$ 4,598.38
RECEIPTS		
Membership Dues @ $2.00 Each	$ 278.00	
Interest on Savings Account	35.68	313.68
TOTAL AVAILABLE		$ 4,912.06
DISBURSEMENTS		
Legal Service		500.00
BALANCE—September 30, 1947		$ 4,412.06

BOOK ANNOUNCEMENTS

Concise Anatomy. By LINDEN F. EDWARDS Ph.D., Professor of Anatomy, The Ohio State University, Columbus, Ohio. The Blakiston Company, Philadelphia and Toronto. xxiv-548 pages. Cloth. 324 illustrations.

Concise Anatomy supplants the former text "Anatomy for Physical Medicine". The purpose of this text is to supply a useful book to students in ancillary fields to medicine, such as Physical Therapy, Occupational Therapy, Medical Technology, Nursing, Dental Hygiene, Physical Education, etc. The order of presentation of the original text has been retained. New textual material and illustrations have been added and various parts have been rewritten. Emphasis is laid on microscopic, developmental and functional significance of structure. This method of presentation greatly facilitates anatomical thinking and creates in the beginner an interest in living anatomy.

It is perhaps regrettable that all color plates of the original text have been omitted, which so greatly aid the beginning student in visualizing structures. However, the text is highly readable and if its purpose is to supply a useful book to students who have a limited time to study anatomy at their disposal, it succeeds admirably.

SUSANNE HIRT

New and Nonofficial Remedies, 1947. Containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1947. Cloth. Price, postpaid, $3.00. pp. 749 Philadelphia: J. B. Lippincott Co., 1947.

Although the latest edition of New and Nonofficial Remedies has some eleven pages fewer than the 1946 book, its increase in size, due to the heavier paper used, and its change of color— dark green to bright red—combine to make a striking contrast with the earlier annual volumes. Another innovation is the relegation of the statements of tests and standards to the back of the book, which makes the text more convenient and usable.

There appears to be no very extensive revision in the various general articles or chapter head discussions, although several new monographs have made their appearance and others have been revised to reflect current medical opinion.

New and Nonofficial Remedies remains a most valuable and authoritative compendium of modern rational therapeutics. With successive editions, it becomes more useful and accessible to the physician and to all those interested in the use, preparation, or manufacture of drugs.

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1946. Cloth. Price, postpaid, $1.00. pp. 135 Chicago: American Medical Association, 1947.

This volume was formerly of most interest to those who wished to know why the Council on Pharmacy and Chemistry had not accepted certain of the preparations it had considered. The reports were mainly those of rejection; though, through the years, the educational nature of the Council's work was attested by status reports on drugs, or therapeutic procedures, or preliminary reports on agents showing promise of usefulness but not yet ready for adoption by the general and medical profession. In recent years, the tendency has been toward a preponderance of the educational type of report. In the present volume, both the condemnatory and the educational phases of the Council's work are represented.

Among the status reports, the excellent article of Dr. Samuel M. Feinberg, "Histamine and Antihistaminic Agents", is probably most worthy of mention. Since its appearance, the Council has accepted for inclusion in New and Nonofficial Remedies, the two new agents of this class evaluated in the article, Diphenhydramine Hydrochloride, and Tripelennamine Hydrochloride (Benadryl Hydrochloride and Pyribenzamine Hydrochloride, respectively).

Attention is called to the several reports on the adoption of generic designations for drugs proposed or marketed under protected names. Not all such actions of the Council have been the subject of separate published reports; the recognized terms have appeared in the published descriptions of the drugs when accepted, and will be inserted in another Council publication, New and Nonofficial Remedies, as adoption of such designations for already accepted protected names proceeds.

EDITORIAL

Virginia and the Hill-Burton Bill

NOW is the time for all county medical societies to become active. The doctors of the country are to be provided with places in which to work. It is up to them to determine what these places shall be. Under the provisions of the bill the Federal Government will furnish one-third of the cost of construction and the community has to furnish two-thirds of the construction costs and provide for the upkeep. The bigger the facility the more federal money, but the citizens will have to go down in their pockets much deeper. There is always a practical mean between what is necessary and what is desired, and this happy mean is determined largely by what can be afforded. This is something that each community must decide for itself. The doctor is interested on two counts: (1) as a prospective user and (2) as a citizen who will have to pay for it. Therefore, he should take the lead in making a survey of the local medical need, but he will have to have the help of the whole community. We suggest the formation of local health councils composed of all organized groups. Farmers, labor, business and the professions should work together on such councils.

The first step in the utilization of Hill-Burton funds is a state-wide survey of the existing hospital facilities and the health needs. This has been done and the report is in the hands of Governor Tuck. We have not seen the report, but we have heard Mr. A. Gibson Howell, who made the survey, explain it. County lines and political bounds have been disregarded. Trade centers have been plotted on the map of the State and it is recommended that hospitals be built in these places. The size of the hospital is determined by the number of persons the trade center serves; a forty bed hospital here, a sixty bed hospital there, and a ninety bed hospital yonder. The largest hospitals of course are to be in the larger cities, and the capstones of the system are to be connected with the two medical schools. In the smallest communities there are to be health centers suitable for the treatment of accidents and emergencies. These should be so located that the services of the local health nurse would be available, and their supervision could be a duty of the local health officer. The minimum equipment should be sufficient to treat shock—intravenous sets, plasma and a connection with a blood bank that would provide blood without delay. It would be likely that such a facility would be a center for the local medical, dental and nursing professions. A laboratory and a technician would be provided in many of these centers. Even a reading room and library might be possible. The proposed set up is quite similar to that used in the army in the last war; general hospital, station hospital, field hospital, portable hospital and collecting station.

The health center or dressing station should meet with almost universal approval. It would cost comparatively little and its maintenance could be underwritten by a service club or some similar group. The small hospital is quite another matter. In a recent hospital survey in Richmond by a recognized authority, the statement was made that a five hundred bed hospital was the most economical size. Such a hospital could provide services (that of a full time pathologist to mention one) that smaller hospitals could neither afford nor obtain. It is well known that hospitals of less than one hundred beds have great difficulty in getting interns. Might it not be better to concentrate hospital facilities into larger units, especially since provision is to be made for the treatment of emergencies on the spot? If a patient who is not in shock could be gotten to a one hundred and twenty or one hundred and fifty bed hospital within an hour, he would fare better than he would in a forty bed hos-

pital only ten minutes away. The cost of maintenence of a hundred and twenty bed hospital would be less than three forty bed hospitals. The State has already solved a similar problem in education except that the building and staffing of a school is simple in comparison with a hospital. At first a one room school house was built in walking distance of every child. Such a plan proved both inefficient and expensive. Now we have centrally located modern schools for a whole county and the children are brought to them in buses.

The question of how big to build the proposed hospitals and where to locate them so as to serve the people best requires careful study. It cannot be decided off hand and it must be decided at the local level. That is why the county medical societies are so important at this time.

Nazi Doctors

SEVEN of the 23 Nazi doctors who were indicted for crimes against humanity were condemned to be hanged and many of the others received long time sentences. This is the first time in history that a doctor of medicine has been so much as even accused of such heinous crimes. It was said these mass sadistic experiments were carried out in the interest of science. The only thing that was learned, was that a half frozen soldier responded more rapidly to the heat supplied by a naked maiden in bed with him, than to any other form of heat. A list of the experiments reminds one of the days of the Inquisition except that in the Inquisition the tortures were directed by Priests upon individuals in an effort to save their souls. The Nazi tortures were done in a wholesale manner with not the least excuse. In Nero's time Christians were put to death in a similar wholesale manner, for the amusement of the populace. There seemed to have been little if any sadist element.

When medicine was young in Babylon, a physician sometimes had his hands cut off when he inadvertently caused the death of a patient or the loss of an eye. This was just a way the Babylonians had of making the doctor careful. In the middle ages some doctors were burned at the stake—Michael Servetus for instance, suffered in this manner but not for any medical practices. He and his books were burned because he had a different idea of the Trinity than the current ones. A Dr. Wertt of Hamburg was burned at the stake in 1522 because he impersonated a woman in order to gain admission into a lying-in room and observe the process of a normal birth. This might be called a crime against decency but it certainly was not a crime against humanity. Coming down to modern times Dr. Samuel Mudd was imprisoned for life in a tropical fortress because he treated the broken leg of a stranger who turned out to be Wilkes Booth, Lincoln's assassin.

Until now no doctor of medicine has been tried, much less convicted, for a crime against humanity. There must be something in the medical discipline that accounts for such a record. Other men, preachers, lawyers, politicians and business men may be more learned and even wiser, but it is the character of the physician that makes him what Stevenson calls the flower of our civilization. The important thing then, now that the fact has been thus definitely established, is why this thing could happen. Had training in medicine deteriorated so much in Germany, that its humanizing influence could no longer withstand the inhuman philosophy of the Nazis. It is well known that the teaching of medicine in Germany under political management had fallen from world leadership. Just how much, under Nazi domination it had deteriorated, is not known. The reports about the treatment of prisoners by German

Army surgeons vary as one would naturally expect, but most of the reports were that the German Army surgeon was skilful and humane even if not sympathetic. Perhaps the doctors who were intrusted with these inhuman experiments were especially trained in the inner Nazi circles. It would be extremely interesting to know what the rank and file of the German physicians think of such practices. If the crimes of the Nazi doctors are condoned by the average German physician, some radical changes in the German medical curriculum must be made.

Experiments upon Human Beings

SO long as there is an abundance of fruit flies, African toads, mice, rats, guinea pigs, rabbits, pigeons, cats, dogs, horses and monkeys available, and so long as antivivisectionists do not forbid their use, there is no need of using man for experimental purposes, except in very rare instances. These occasions have arisen in connection with diseases peculiar to man. Until the Nazis upset all precedents of decency, experiments upon human beings have been few, and the experimentees have not been allowed to volunteer until after the risks that they ran have been fully explained to them.

When Jane Todd Crawford presented herself to Ephraim McDowell with a huge ovarian tumor, her condition was considered hopeless. No such tumor had ever been removed; in fact few abdominal operations of any kind had been successful. McDowell told Mrs. Crawford that her only hope was in extirpation of the tumor, and that it was merely an experiment. She said that she was willing to go through with the experiment. Mind you, that was before the days of anesthesia. She went through with it in a way entirely in character with the heroine that she was. Thus was laid the foundation for abdominal surgery. In a similar way little Joseph Meister the first person whom Pasteur treated for rabies, has gone down in medical history. Crawford W. Long's patient, James Venable, the first person ever to undergo ether anesthesia, and Gilbert Abbott, Warren's patient, to whom Morton gave ether without knowledge that it had ever been done before, merit our praise and thanks. Long's wife, the first woman to undergo obstetric anesthesia (Dec. 17, 1845), belongs in the same category.

In a somewhat different category are the medical men who deliberately experimented upon themselves in order to establish medical truth. One of the earliest of these was the celebrated John Hunter, who in the course of his studies of venereal disease in 1767, inoculated himself with gonorrheal pus in order to prove that gonorrhoea and syphilis were not the same disease. Unfortunately for Hunter and medical science the patient had a mixed infection. Hunter contracted syphilis and the two diseases were considered different manifestations of the same disease until Philippe Ricord (1799-1889) years later proved that Hunter was wrong. A more formidable experiment was undertaken in 1885, when Daniel A. Carrion, a Peruvian medical student, undertook to prove the relationship between Oroya fever and *verruga peruana*. He inoculated himself with blood and tissue from a verruga nodule, and nine days later died of typical Oroya fever. The self-martyrdom of Howard Taylor Ricketts in Mexico City (1910) in connection with typhus fever is better known in the United States.

The introduction of anesthesia was the occasion of much human experimentation. In addition to (1) the "first" patients mentioned above, there were (2) a number of medical men who experimented upon themselves. Horace Wells, a dentist of Hart-

ford, had himself anesthesized with nitrous oxide in order to test its effectiveness. Later in Edinburgh, Sir James Y. Simpson, George Keith and Matthews Duncan put themselves to sleep with chloroform in their experiments to find a substitute for ether.

However, the search for the cause of yellow fever was the occasion for the most extensive human experimentation. The entire Yellow Fever Commission of the United States Army experimented upon themselves and Carroll and Lazear came down with the disease. Lazear's case was fatal. In addition there were a number of volunteers from the enlisted men for the elaborate experiments to prove that the Stegomyia fasciata was the vector and the only vector of the dread disease.

This brings us to the third category. We have already discussed "first" patients who might expect personal benefit should the "experiment" prove successful, and second the medical men who were driven by scientific curiosity. The third group had only altruistic and humanitarian motives. In this group belongs James Phipps, who in 1796 was inoculated by Jenner with cow pox and later submitted to an inoculation with smallpox to test the effectiveness of vaccination. However, the first prize in heroism belongs to the United States soldiers who voluntarily submitted to the conditions of Camp Lazear. They were isolated from their fellows, exposed to infected mosquitos and shut up in a small illy ventilated building containing dreadfully contaminated, soiled garments of yellow fever patients. They even slept in clothes in which yellow fever patients had died. John R. Kissinger and John J. Moran submitted to the bites of the mosquitos and both contracted the disease. Folk, Jernigan and Dr. Robert P. Cooke slept with the fomites and were unharmed. In the opinion of Major Walter Reed, this exhibition of moral courage has never been surpassed in the annals of the Army of the United States.

The General Practitioner and the Tumor Clinic.

AT the last meeting of the Medical Society of Virginia, the attention of the cancer Committee of the Society was called to the fact that physicians interested in cancer control but residing in localities unable to staff a Tumor Clinic feel left out of the cancer program.

The ultimate unit in a cancer control program is the individual physician. How successfully cancer is controlled in any state depends on how high a percentage of doctor's offices serve as cancer detection centers, on how many physicians are on the alert for cancer.

The function of the Cancer Committee is to stimulate "cancer consciousness" among physicians. Its purpose in certificating Tumor Clinics is to provide information to State and volunteer agencies as to where public monies can be effectively spent for the handling of medically indigent proven or suspected cancer patients. The Cancer Committee hopes and believes that the work done in the Tumor Clinics not only services the indigent sick but stimulates awareness of the cancer problem among physicians. The fact that some doctors residing in localities unable to organize a Tumor Clinic feel left out of the cancer program supports that belief.

But it is not necessary to serve on a certificated Tumor Clinic staff to participate in cancer control. It is far more important for each doctor to see to it that, in so far as possible, cancer among his patients is prevented and diagnosed early. To those interested in a group effort, the Cancer Committee calls attention to the possibilities offered by Diagnostic Follow-Up Tumor Clinics. Every county and locality can staff such a clinic where medically indigent cancer suspects may be investigated. Proven

cases, upon completion of this work-up and such surgical treatment as may be possible locally, can be referred to the nearest certificated Tumor Clinic for x-ray therapy. In a locality which does not have full surgical facilities, cancer suspects can be investigated in a Diagnostic Tumor Clinic and referred to a larger center for surgery as well as x-ray therapy. The Cancer Committee feels that "full surgical facilities" implies not only adequate hospital and operating room equipment but also the services of a surgeon with adequate training and experience in cancer surgery. Regardless of the manner in which the case is handled, the patient, on completing his treatment, will be followed up at stated intervals in the Diagnostic-Follow-Up Clinic. The Cancer Committee invites formation of Diagnostic Tumor Clinics and will welcome inquiries from interested groups.

GEORGE COOPER, JR., M. D.,
Chairman, Cancer Committee,
Medical Society of Virginia

SOCIETIES

The Mid-Tidewater Medical Society

Met at West Point on October 28th, with Dr. W. H. Springall presiding. The following program was presented: Disease of the Rectum by Dr. Russell Buxton; Delivery of Retained Placenta by Dr. C. D. Bradley; and Arthritis by Dr. William Read. All speakers are of Newport News.

Officers for 1948 were named as follows: Dr. J. R. Gill, Mathews, will succeed to the presidency; Dr. M. H. Harris, West Point, president-elect; Drs. J. M. Gouldin, Tappahannock; A. L. VanName, Urbanna; H. A. Tabb, Gloucester; R. B. Bowles, Mathews; R. D. Bates, Newtown; Clarence Campbell, Sparta; A. W. Lewis, Jr., Aylett; and J. R. Parker, Providence Forge, vice-presidents; and Dr. W. H. Hosfield, West Point, secretary-treasurer.

Northern Neck Medical Society.

The October meeting of this Society was held on the 23rd at The Tides Inn, Irvington, with the president, Dr. C. Y. Griffith, Machodoc, presiding. The following officers were elected: President, Dr. A. Broaddus Gravatt, Jr., Kilmarnock; vice-presidents, Dr. H. E. Sisson, Warsaw, and Dr. M. Mercer Neale, Jr., Heathsville; and secretary-treasurer, Dr. Lee S. Liggan, Irvington (re-elected).

Alexandria Medical Society.

This Society was addressed by Dr. G. Halsey Hunt of the U. S. Public Health Service at its meeting on November 13. He had recently finished a study of group practice and presented a resume of his findings. He discussed the physical make-up of group practice, the various financial arrangements, the types of groups, and the role of the general practitioner in group practice. The presentation was well organized, thorough and enlightening.

GEORGE SPECK,
Secretary.

The Wise County Medical Society

Met at Hotel Norton the evening of November 12, 1947 as the guests of Dr. A. H. Bond of Norton, who served the steak dinner with all the attachments that go with it. This was an outstanding meeting with twenty-seven in attendance.

Dr. John R. Daugherty of Knoxville, Tennessee, gave a lecture on "Urological Problems", which he illustrated with a hundred x-ray films selected from his records.

Dr. Eugene J. Yorkoff of Pound and Dr. G. F. Sutherland of Big Stone Gap were elected to membership.

At the close of the meeting there was a film in color on the "Treatment of Anemia".

T. J. TUDOR, *Secretary*

Roanoke Academy of Medicine.

At the November meeting of the Academy, held on the 3rd, the following scientific program was presented: The Modern Treatment of Syphilis and Gonorrhea by Dr. John F. Mahoney, Medical Director of the U. S. Public Health Center at Staten Island; and Recent Advances in Chemotherapy of

Tuberculosis by Dr. H. H. McLeod Riggins, President, Trudeau Society, New York City.

Dr. Charles M. Irvin is president of the Academy and Dr. Ira Hurt, secretary-treasurer.

Lynchburg Academy of Medicine.

The regular monthly meeting of the Academy was held on October 20th. The speaker for the evening was Dr. Frank Lock, Professor of Obstetrics and Gynecology at the Bowman Gray School of Medicine, Winston Salem, North Carolina, who spoke on "Psychomatic Gynecologic Problems".

The Virginia Peninsula Academy of Medicine

Had as its November speaker Col. James P. Cooney, M. C., of Washington, D. C., who discussed the effects of the atom bomb, he having participated in the Bikini experiment. The meeting was held in the Officers' Club at Langley Field and there was an attendance of 110. Col. Cooney came upon the invitation of Col. Gus Ledfors, M.C., commanding officer of Langley Field Hospital. Dr. Paul Hogg of Newport News presided and Dr. Chester D. Bradley of Newport News was at the secretary's desk.

NEWS

The Southern Medical Association

Is holding its annual meeting in Baltimore, November 24, 25 and 26, under the presidency of Dr. Elmer L. Henderson of Louisville, Ky. There will be scientific and technical exhibits, general meetings and scientific sessions as well as gatherings of allied associations. Social features will also add to the interest and pleasure of those attending.

Dr. Rudd Honored.

A portrait of Dr. Wortley F. Rudd, former dean of the School of Pharmacy, Medical College of Virginia, was presented to the College by the Richmond Retail Druggists Association in the auditorium of the Richmond Academy of Medicine on November 7th. The portrait was painted by John D. Slavin of Richmond.

W. E. Locke, a past president of the association, presented the portrait to the Medical College, and it was accepted for the college by Robert T. Barton, Jr., vice-chairman of the Board of Visitors. Senator Lloyd C. Byrd spoke on "Dr. Rudd as a Teacher", and Dr. John Bell Williams eulogized him as a friend.

Dr. Rudd retired July 1st after serving twenty-seven years as dean of the School of Pharmacy of the Medical College of Virginia and 43 years as a member of the faculty.

Dr. Melvin W. Lamberth, Jr.,

Recently of Richmond, is now located for general practice at Kilmarnock.

Christmas Seals.

The Christmas Seal Sale is already under way. Much excellent work is accomplished with the money received from their purchase and this is to urge our readers to help again this year as they have in the past.

Corrective Physical Rehabilitation.

Latest developments in the field of corrective physical rehabilitation were presented during a school for corrective therapists from Veterans Administration Hospitals in nine States held at McGuire VA Hospital in Richmond from November 10 through 22.

Among those on the school program were Dr. Edmund M. Ellerson, McGuire manager; Dr. George T. Stafford, health coordinator of the University of Illinois and a VA consultant; Dr. John Eisle Davis, the VA's chief of corrective physical therapy; Dr. George G. Deaver, physician in charge of rehabilitation and physical medicine, New York University Medical College and Bellevue Hospital; Kjell Peterson, athletic director of Metropolitan Life Insurance Company and a VA consultant; Dr. A. B. C. Knudson, assistant VA chief of physical medicine; and Dr. A. Ray Dawson, who became chief of the VA's physical medicine rehabilitation service on November 15 after serving for a year and a half as rehabilitation chief in the VA Richmond Branch Office.

Those from the Medical College scheduled to

take part in the school included Dr. Josephine Buchanan, Dr. Ellen N. Duvall, Dr. Ernst Fischer, Dr. F. A. Hellebrandt, Susanne Hirt, Sarah J. Houtz, Helen V. Skowlund, Dr. Elam C. Toone, Jr., and Edith Vail.

Among those representing McGuire were Dr. Benedict Nagler, Dr. G. S. Maxwell, Dr. H. S. Talbot, Dr. J. E. Hopkins, Dr. J. L. Ulmer, Dr. Jerome Lee, and Leon Edman. Raymond W. Swanson, executive officer of the branch rehabilitation division, also took part in the school.

Medical College of Virginia.

Despite shortages of personnel and difficulties in obtaining supplies the Medical College of Virginia Hospital last year cared for the largest number of patients in its history, Mr. C. P. Cardwell, Jr., Director, stated. Hospital admissions had steadily increased from 7,906 in 1928-29 at the rate of about 1,000 a year until 1937-38 when they climbed about 2,000 a year reaching a peak last year with 18,701.

Surgical operations numbered 3,547 nineteen years ago and remained under 4,000 until 1932-33 when they increased very rapidly to an all time high last year with 7,515 recorded in the nine operating rooms of the hospital.

While according to Mr. Cardwell there has been a decline in home obstetrical deliveries by members of the hospital staff, he said there has been a marked increase in the number of obstetrical deliveries within the hospital during the past nineteen years. In 1929-30, for instance, 330 deliveries were made within the hospital and 298 in homes whereas last year 3,080 deliveries were made in the hospital and 191 in homes.

During the nineteen year period from 1928-29 to 1946-47 the greatest increase in service was reported to be in the emergency room where in 1928-29 there were 3,064 patients treated as compared with 30,258 last year. Trailing closely, however, was the growth in the pharmacy department of the hospital where in 1928-29 19,326 prescriptions were filled as compared with 117,358 last year. The hospital director pointed out that in the nineteen year period visits to the out-patient clinic had increased from 34,609 to 72,963, visits to the dental clinic from 10,000 to 23,110, and hospital dental cases from 2,411 to 5,426.

The house staff of the hospital today numbers 112 which is almost double what it was five years ago. This has been necessary to meet the demands of increased services to patients and to train specialists in the various fields of medicine.

Dr. Chapin Added to Staff.

Dr. W. E. Chapin, Richmond, has been added to the staff of the State Health Department's Bureau of Maternal and Child Health as pediatrician.

Mary Harley Infirmary.

Upon request of the alumnae and friends, the Board of Overseers of Sweet Briar College has approved the name of Mary Harley Infirmary for the college infirmary, in honor of Dr. Harley, its first physician, who was largely instrumental in raising funds for establishing it. The present infirmary now contains twenty beds and is well equipped.

Dr. Harley was a member of the faculty when the college opened in 1906 and remained with it until her retirement in 1936. Since then she has pursued her study of anthropology in Hawaii, South Africa, at the Museum of Natural History in New York, and at the University of Virginia, but maintains her interest in the infirmary she established.

University of Virginia School of Medcine.

On October 3rd, Dr. Manfred W. Comfort of the Mayo Clinic spoke to the faculty and student body on the subject of "Pancreatitis".

On November 14th, Dr. Paul B. Magnuson, Professor of Surgery, School of Medicine, Northwestern University, gave the first annual lecture under the Charles Venable Lectureship on Traumatic Surgery. Dr. Magnuson spoke on the subject of "Backache and Disc Symptoms: So Confusing".

On November 17th, Dr. Philip S. Hench of the Mayo Clinic, gave the annual Alpha Omega Alpha address. Dr. Hench spoke on "Walter Reed and the Conquest of Yellow Fever".

On November 6th, Dr. H. B. Mulholland, Professor of Practice of Medicine, spoke at the Post Graduate Seminar of the Medical College of the State of South Carolina, Charleston, S. C. on the subject of "Recent Advances in the Treatment of Diabetes Mellitus".

The Ciba Pharmaceutical Company has given a grant of $2500 for investigation in the field of Bacterial Allergy. This investigation will be conducted in the Department of Internal Medicine under the supervision of Dr. Oscar Swineford, Professor of Practice of Medicine.

Post-Graduate Assembly.

The Fulton County Medical Society announces a three-day Post Graduate Assembly to be held in Atlanta, January 28, 29 and 30, 1948, immediately following the Regional Meeting of the College of Surgeons. Because of the College of Surgeons meeting, surgical subjects will not be emphasized in this Assembly. The program has been arranged to help the average doctor keep abreast of the newer developments, but it is believed it will offer something of value to every man and woman practising medicine in the Southeast.

The College of Surgeons invites all physicians in this region to their meeting, the expenses of which will be met by the College. The Post Graduate Assembly will have to require a registration fee.

For further information, write the Fulton County Medical Society, 875 West Peachtree Street, Northeast, Atlanta, Georgia.

The Southeastern Surgical Congress

Will hold its sixteenth annual assembly at the Hollywood Beach Hotel, Hollywood, Florida, April 5-8, 1948. Among those on the program are Drs. Julian L. Rawls, Norfolk, and J. W. Devine, Jr., Lynchburg.

Dr. Philip E. Rossiter,

Recently with the Veterans Hospital in Canandaigua, is now located in Avon, New York, where he is engaged in general practice and geriatrics.

A Course in Clinical Electrocardiography

Will be presented under the auspices of the Department of Continuation Education, at the Medical College of Virginia every Friday from 2:00—4:00 p. m., beginning on December 5, 1947 and continuing for four months. The presentations will be informal and free discussions, and interpretations of abnormal tracings will be presented. The fee will be on the basis of $5.00 per month.

For participation in this course, application should be made to the Department of Continuation Education, Medical College of Virginia.

The Council on Industrial Health

Of the American Medical Association will hold its Eighth Annual Congress in the Cleveland Auditorium, Cleveland, on January 5 and 6, 1948. These dates immediately precede the Interim Session of the American Medical Association, which will be held in the Auditorium on January 7 and 8. General practitioners supply a large part of the medical services which workers receive through industry, and they are cordially invited to attend these industrial health sessions. The program of the Congress is being constructed with general practitioners in mind and will include discussions of first aid and emergency services in industry, physical examinations, administrative practices, applied physiology, aviation medicine, radiation medicine and practical expositions of occupational disease management, traumatic surgery and rehabilitation. Since full use of medical services in industry depends on support from management and the worker, the essential relationships will be discussed. Industry needs medicine as a practical ally and to promote human relations. The Industrial Health Congresses are intended to further these objectives.

The Jefferson Medical College.

The Annual Lecture given by the Epsilon Chapter of the Alpha Kappa Kappa Fraternity, in memory of Dr. George A. Ulrich, Clinical Professor of Obstetrics of The Jefferson Medical College, Philadelphia, was held on October 20th. The Lecturer was Andrew Conway Ivy, Ph. D., M.D., Distinguished Professor of Physiology in the Graduate School and Vice President in charge of the Chicago Professional Colleges, of the University of Illinois, Department of Medicine. His subject was "Experiments in Resuscitation from Asphyxia."

Married.

Dr. Norman Sollod, Richmond, and Miss Phyllis Laurel Freed, Harrisonburg, November 2nd. Dr. Sollod is a graduate of the Medical College of Virginia, class of '39.

Dr. J. Frasia Jones, Jr., and Miss Henrietta Short Tabb, both of Richmond, November 8th. Dr. Jones is a graduate of the Medical College of Virginia in 1944.

Dr. Henry Carl Messerschmidt, Jr., Richmond, and Miss Betty Rowland Fidler, Burlington, N. C., November 15th. He is a graduate of the Medical College of Virginia in 1946. They will make their home in Bethesda, Maryland.

Dr. Robert C. Kirkwood, Hampton, and Miss Ruth A. L. Dorsey, New York, N. Y., October 1947. Mrs. Kirkwood is emeritus dean of women

of the Drexel Institute of Technology in Philadelphia.

International College of Surgeons.

At the Twelfth Assembly and Convocation of the United States Chapter, International College of Surgeons, held in Chicago on October 3, the following were among the 810 surgeons inducted into the College:

Fellows:

Dr. George W. Botts ----------Norton
Dr. George S. Bourne ----------Roanoke

Associate:

Dr. Mallory Sinclair Andrews ------Norfolk

Dr. Dawson Promoted.

Dr. A. Ray Dawson, who has been chief of the Veterans' Administration Rehabilitation Service at Richmond, has been named as Chief of the Physical Medicine Rehabilitation Service with headquarters in Washington, D. C.

Dr. Carolyn McCue

Richmond, has been named clinical director of the rheumatic fever clinic sponsored jointly by the State Department of Health and the Medical College of Virginia. She succeeds Dr. Louise Galvin, now director of the Health Department Bureau of Crippled Children.

Orthopedic Clinics Sponsored by State Health Department.

The Crippled Children's Bureau sponsors clinics situated at strategic points throughout the state. The services of orthopedic surgeons, who are members of the State Orthopedic Society, are utilized in the conduct of these clinics as clinicians. Local health departments are responsible for organizing and conducting follow-up of the patients as outlined by the orthopedist. Only such patients are eligible for these clinics on whom the expense of taking care of their condition would produce a hardship financially. Those who can afford to pay for medical care are not eligible for this service.

The Crippled Children's Bureau will provide hospitalization for these clinic patients where the clinician makes his diagnosis and recommends that hospitalization be taken care of under the plan of the Crippled Children's Bureau. The orthopedic clinicians know the requirements for utilizing this plan.

The tentative schedule for the first six months of 1948 is as follows:

Arlington—Every Tuesday and Thursday.
Boydton—4th Tuesday—March, June.
Bristol—2nd Wednesday—January, March, May.
Chatham—3rd Thursday—February, May.
Courtland—4th Tuesday—January, March, May.
Covington—3rd Thursday—June.
Emporia—4th Tuesday—January, March, May.
Farmville—3rd Thursday Monthly.
Fredericksburg—2nd Saturday—March, June.
Hampton—3rd Friday Monthly.
Harrisonburg—2nd Saturday—March, June.
Lawrenceville—4th Tuesday—March, June.
Lebanon—2nd Wednesday—February, June.
Lexington—4th Tuesday—January, April.
Luray—3rd Wednesday—March.
Lynchburg—1st Friday Monthly.
Norton—2nd Wednesday—April.
South Boston—4th Friday—January, May.
Suffolk—3rd Tuesday Monthly.
Portsmouth—1st Tuesday Monthly.
Winchester—2nd Friday and Saturday—February, May.
Woodstock—3rd Wednesday—March.
Richmond—4th Sunday—January, April.
Roanoke—2nd Thursday Monthly.
Bedford—2nd Friday—April.

There are other clinics that are scheduled by mutual agreement between the Crippled Children's Bureau and the clinician, usually two a year. This schedule is subject to some variation where, for the sake of expediency, the clinician and the director of the Crippled Children's Bureau agree.

Midwinter Seminar in Otolaryngology and Ophthalmology.

This year the University of Florida Midwinter Seminar in Otolaryngology and Ophthalmology will be held at the Flamingo Hotel in Miami Beach, beginning on January 12 and continuing through January 17, 1948. The lectures in Otolaryngology will be presented on the 12th, 13th and 14th, and those in Ophthalmology on the 15th, 16th and 17th. The registration fee is $25.

The distinguished lecturers for the courses in Otolaryngology include Drs. Lawrence R. Boies, Minneapolis; Louis H. Clerf, Philadelphia; Kenneth M. Day, Pittsburg; Thomas C. Galloway, Chicago; James H. Maxwell, Ann Arbor, Mich.; Arthur W. Proetz, St. Louis; and Harry P. Schenck, Philadelphia. Among the outstanding ophthalmologists who will lecture are Drs. S. Judd Beach, Portland, Me.; William L. Benedict, Rochester,

Minn.; Daniel B. Kirby, New York; Peter C. Kronfeld, Chicago; and Dohrmann K. Pischel, San Francisco.

The Midwinter Seminar follows immediately the Pan-American Congress of Ophthalmology, which will be held in Havana, Cuba, January 5-10, 1948. The dates chosen for the two meetings make possible a delightful opportunity to attend both and at the same time enjoy a winter vacation amid unsurpassed resort attractions.

Christmas Is Again Around the Corner.

Do you want to celebrate this Christmas in the true holiday spirit? Then invite a hungry European family to dinner as your guests during the holiday week. Invite them in your name . . . or invite them in the name of a friend.

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Gastroenterological Award Contest.

The National Gastroenterological Association has announced its Annual Cash Prize Award Contest for 1948. One hundred dollars and a Certificate of Merit will be given for the best unpublished contribution on Gastroenterology or allied subjects. Contestants residing in the United States must be members of the American Medical Association. The winning contribution will be selected by a board of impartial judges and the award is to be made at the Annual Convention Banquet of the National Gastroenterological Association in June of 1948.

All entries for the 1948 prize should be limited to 5,000 words, be typewritten in English, prepared in manuscript form, submitted in five copies, accompanied by an entry letter, and must be received not later than April 1, 1948. Entries should be addressed to the National Gastroenterological Association, 1819 Broadway, New York 23, N. Y.

Dr. E. G. Gill,

Roanoke, has been appointed by Dr. Thomas E. Hughes, immediate past president of the Virginia Society of Ophthalmology and Otolaryngology, to represent this Society at the Third Pan-American Congress of Ophthalmology to be held in Havana, Cuba, January 4 to 10, 1948. Dr. Gill is also reading a paper at this meeting on "Recent Advances in Intracapsular Cataract Surgery".

Dr. J. T. Showalter,

Class of '36, University of Virginia, who has been taking special work at Philadelphia Hospitals for the past year, has now located in Christiansburg where he is engaged in general medicine and surgery at the New Altamont Hospital with Drs. A. M. Showalter, R. H. Grubbs and George M. Caldwell.

The Southeastern Allergy Association

Will hold its third annual meeting in Richmond, January 17 and 18, under the presidency of Dr. J. Warrick Thomas of this city. Headquarters will be at the Jefferson Hotel. Further information may be obtained from Dr. Thomas or the secretary, Dr. Katharine B. MacInnis, Columbia, S. C.

Dr. Linwood D. Keyser,

Roanoke, was one of the guest speakers at the 17th Annual Fall meeting of the Oklahoma City Medical Conference. He addressed the Conference on "Endocrinology of the Prostate" and on "Noncalculous Pain Syndromes in the Urinary Tract".

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OBITUARIES

Dr. Charles Cheves Haskell,

Well known Richmond physician and, since 1937, president of Charles C. Haskell & Company, Richmond, died November 12, at his home, after a brief illness.

Dr. Haskell was born March 29, 1880, in Columbia, S. C., and was a son of the late John Cheves Haskell and Sarah Hampton Haskell. He was a grandson of General Wade Hampton, C.S.A.

After graduating from the University of Virginia, Dr. Haskell attended Harvard University and received his M.D. degree from that institution in 1908. He came to Richmond in 1913 where he practiced medicine and taught in the department of physiology and pharmacology of the Medical College of Virginia. In 1916 he was made head of the department, a position which he held with distinction until he resigned in 1929 to become medical director of Ciba Pharmaceutical Company, Summit, N. J. In 1937 he returned to Richmond and founded here the Charles C. Haskell Company, manufacturers of prescription pharmaceuticals, of which he continued to be president until his death.

Dr. Haskell was an outstanding teacher and investigator. Although the research facilities at the College were rather meager at the time he was teaching there, he kept the flame of research burning brightly in his department and carried out investigations on the pharmacology of digitalis, which gave him world-wide recognition and placed him as one of the most outstanding investigators in that field. Probably no piece of investigation portrays more his unselfish devotion to science than a piece of work which he carried out, with the cooperation of Dr. E. C. L. Miller, during the First World War. Since it was rumored at the time that German saboteurs were adding ground glass to flour, they ate ground glass and showed that it caused no ill effects.

He was also interested in the therapeutic approach to the treatment of mercury poisoning and made important contributions to that subject. Truly, it can be said of him that his spirit liveth in the hearts and minds of all who were privileged to know him.

He was a member of the Richmond Academy of Medicine, the Medical Society of Virginia and a Fellow of the American Medical Association.

Surviving are his wife, the former Miss Marie Graham, of Boston, Massachusetts, one daughter, Miss Margaret Graham Haskell; one brother, Frank Hampton Haskell, of Columbia, S. C., and several nieces and nephews.

Dr. Bernard Heath Early,

For many years a practicing physician at Esmont, died at the home of his daughter in New Orleans on November 10th. He was seventy years of age and a graduate of the former University College of Medicine, Richmond, in 1898. Dr. Early had retired from active practice several years ago due to ill health. He had been a member of the Medical Society of Virginia for forty-seven years.

Dr. Joseph Grice,

Prominent physician of Portsmouth, died October 21st. He was seventy-eight years of age and graduated in medicine from the University of Virginia in 1893. Dr. Grice was the first bacteriologist of Portsmouth and was for a time the city school physician. He was a small boat enthusiast and organized the Portsmouth boat club. Dr. Grice had been a member of the Medical Society of Virginia for fifty-one years.

Dr. Claude Gibson Hooten,

Lynchburg, died July 25 of heart disease. He was fifty-six years of age and a graduate of Bennett Medical College, Chicago, in 1915. He saw service in World War I and was for a number of years a medical examiner for the Norfolk and Western Railway. Dr. Hooten was a member of his local and State Medical Societies and also of the American Medical Association.

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